



October 5, 2003

Ms. Kathy Figuracion
General Services Administration
Safety, Environment, & Fire Protection Branch
Room 2080, 7th Street, SW,
Washington DC 20407

**RE: Indoor Air Quality Survey, Room 9190, Room 9138, and Room 9121, Skyline Building,
Falls Church, Virginia
Job Number: 03-478**

Dear Ms. Figuracion:

Tidewater, Inc. (Tidewater) performed an indoor air quality (IAQ) survey in Room 9190, Room 9121, and Room 9138 of the Skyline Building, located at 5111 Leesburg Pike, Falls Church, Virginia. The IAQ survey was performed by Tidewater's industrial hygienist Mr. Skanda Abeysekere on September 15, 2003. This IAQ survey was performed in response to occupant complaints of respiratory problems in Room 9190 and Room 9138.

The scope of work for the IAQ survey included:

- Visual inspection of the complaint areas, signs for water intrusion, and any building materials of concern present;
- Direct read measurements for temperature, relative humidity, and carbon dioxide (CO₂) and
- Air sampling for airborne fungi and bacteria;

The remainder of this report is divided into the following sections:

Section 1: Visual Inspection;
Section 2: Methodology;
Section 3: Results;
Section 4: Conclusions; and
Section 5: Recommendations.

1. VISUAL INSPECTION

During the visual inspection of Room 9190, Tidewater did not observe any signs of water damage on the ceiling, walls or carpeting of Room 9190. Room 9190 appeared to be clean with no moisture, standing water or excessive dust on office furniture (Photo 1 Appendix A). Tidewater did not observe any mold formations or detect any odors emanating from Room 9190 during the inspection. During occupant interviews Tidewater was informed that the occupants in Room 9190 experienced coughing, sneezing and upper respiratory problems while working within the office area. Furthermore, Tidewater was informed that the air circulation within Room 9190 became extremely low when the Table fans in Room 9190 were shut off. Tidewater personnel did observe 2 Table fans in operation in Room 9190 during the inspection. Room 9121 is a photocopy room, temporarily occupied by employees for short time periods. An inspection of Room 9121 revealed that the room was clean with no moisture, standing water or excessive levels of dust (Photo 2 in Appendix 1).

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SAFETY, ENVIRONMENT &
FIRE PROTECTION BR. (WPY/G)
2003 OCT 14 P 2:23

An air conditioning unit was observed in Room 9121 during the inspection. An inspection of the filters of the air conditioning unit showed excessive levels of dust (Photo 3 Appendix 1). During the visual inspection of Room 9138 Tidewater personnel did not observe any signs of water damage on the walls, ceilings or carpeting of the office space. The office space appeared to be clean with no moisture, standing water or excessive levels of dust (Photo 4 in Appendix 1).

2. METHODOLOGY

Tidewater's methodology, sample and data collection for this IAQ survey is described in this section.

IAQ for Temperature, Relative Humidity, and Carbon Dioxide

Tidewater used an AQ-5000 Indoor Air Quality Monitor to collect readings for carbon dioxide (CO₂), relative humidity, and temperature within the work areas. Readings were taken in Room 9190, Room 9138 and Room 9121. An ambient sample was also taken for comparative analysis. Carbon dioxide is used as an indicator of the rate of fresh air exchange into the office areas.

Microbial Air Sampling

Tidewater conducted microbial air sampling in Room 9190, Room 9138, and Room 9121. An ambient sample was also taken for comparative analysis. The samples were analyzed for total airborne bacteria and fungi viable spore concentrations including species identification.

Samples were collected using an Andersen N-6 plate impactor and standard petri/agar plates prepared by EMSL Analytical Inc. EMSL Analytical Inc. also incubated the plates and conducted the colony counts and species identification.

3. RESULTS

The results of the sampling and analysis are presented in this section of the report.

Temperature, Relative Humidity, and Carbon Dioxide Monitoring

The results of the AQ-5000 monitoring are presented in Table 1. The monitoring was conducted on September 15, 2003. Tidewater personnel collected readings in Room 9190, Room 9121, and Room 9138. The AQ-5000 monitoring device obtained discrete readings of Temperature, Relative humidity, and CO₂ over the course of the day. The results of the monitoring are presented in Table 1. A site map indicating the sampling locations is included in Appendix B.

TABLE 1: TEMPERATURE, RELATIVE HUMIDITY (RH), AND CARBON DIOXIDE

Location	Time	Temperature (°F)	Relative Humidity (%)	CO ₂ level (ppm)
Room 9190	11:02AM	78.0	57.0	450
	11:03AM	77.6	58.1	476
	11:06AM	77.6	58.1	480
	11:08AM	77.4	57.7	478
	11:10AM	77.4	57.9	478
	11:12AM	77.5	58.0	482
	11:14AM	77.0	58.1	444
	11:16AM	76.9	58.9	472
	11:18AM	76.7	59.7	527

TABLE 1: TEMPERATURE, RELATIVE HUMIDITY (RH), AND CARBON DIOXIDE (cont.)

Location	Time	Temperature (°F)	Relative Humidity (%)	CO ₂ level (ppm)
Room 9121	12:20PM	81.0	49.2	554
	12:32PM	82.1	45.2	493
	12:34PM	82.1	44.8	485
	12:39PM	82.1	44.2	481
	12:42PM	82.2	44.2	478
	12:46PM	82.2	44.0	479
	12:48PM	82.1	43.9	478
	12:52PM	82.3	43.9	478
	12:56PM	82.3	43.7	478
	12:58PM	82.3	43.9	479
Room 9138	1:05PM	76.8	48.5	486
	1:07PM	76.8	49.0	495
	1:09PM	76.5	49.2	497
	1:14PM	76.5	49.2	498
	1:16PM	76.1	49.8	505
	1:18PM	76.0	49.8	513
	1:20PM	76.0	50.0	519
	1:22PM	75.7	50.6	532
	1:24PM	75.6	50.6	541
	1:26PM	75.6	50.3	546
Ambient				
		83.6	59.30	363

According to the American Society for Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) guidelines, the temperature range in summer months should be maintained between 73°F and 79°F for maximum occupant comfort. The ASHRAE guideline for temperature for winter months is between 68°F and 74.5°F. The temperature levels in Room 9190 and Room 9138 were within the guideline of 73°F and 78°F specified by AHSRAE for summer months. The temperature levels in Room 9121 were above 79°F the upper limit of the temperature guideline specified by ASHRAE. The high temperature levels observed in Room 9121 should not be of concern as Room 9121 is a photocopy room and therefore is not occupied by employees for long periods of time.

The relative humidity levels in Room 9190, Room 9121 and Room 9138 were within the Relative humidity guidelines established by ASHRAE for office environments. The ASHRAE guideline for relative humidity in office environments is between 30% and 65%.

The CO₂ measurements in Room 9190, Room 9121 and Room 9138 were well below the ASHRAE guideline of 1,000 ppm established for maximum CO₂ levels in office environments.

Microbial Air Sampling

The airborne bacteria concentrations are summarized in Table 2. The microbial air sampling results indicated that airborne bacteria levels in the samples taken from Room 9190, Room 9138 and Room 9121 were lower than 500 viable colony-forming units in a cubic meter of air (CFU/m³), which is the threshold level suggested by recently published guidelines from the World Health Organization (WHO).

The microbial air sampling results indicated that all of the bacteria species detected in all samples were non-pathogenic and not of concern. Tidewater did not note any amplification sites for any of the bacteria species. A site map of the sampling locations is included in Appendix B. Copies of the laboratory reports for airborne microbial sampling, are included in Appendix C.

TABLE 2: AIRBORNE BACTERIA CONCENTRATIONS

Sample Number	Location	Species	Concentration (CFU/m ³)
1	Room 9190	<i>Corynebacterium species</i>	36
		<i>Micrococcus species</i>	54
		<i>Staphylococcus species</i>	71
		Total:	161
4	Room 9121	<i>Micrococcus species</i>	89
		<i>Bacillus species</i>	54
		<i>Staphylococcus species</i>	71
		<i>Others</i>	18
		Total:	232
6	Room 9138	<i>Corynebacterium species</i>	18
		<i>Bacillus species</i>	36
		<i>Micrococcus species</i>	36
		<i>Staphylococcus species</i>	54
		Total:	143
8	Ambient	<i>Staphylococcus species</i>	54
		Total:	54

The airborne fungi concentrations are summarized in Table 3. Fungal air concentrations over 1,000 CFU/m³ may suggest possible indoor sources of fungi or poor filtration in the HVAC system. A fungal concentration of 1,000 CFU/m³ is the threshold level suggested in the OSHA Technical Manual, section III, Chapter 2. The microbial air sampling results indicated that the airborne fungi concentrations in Room 9190, Room 9121, and Room 9138 were lower than 1,000 CFU/m³. The genus *Aspergillus* was detected at relatively low concentrations in the sample taken from Room 9190. At significant concentrations *Aspergillus* species can cause respiratory irritations in sensitized individuals. However, since *Aspergillus* was detected at relatively low concentrations in Room 9190 the presence of this species should not be of concern. A site map of the sampling locations is included in Appendix B. Copies of the laboratory reports for airborne microbial sampling are included in Appendix C.

TABLE 3: AIRBORNE FUNGI CONCENTRATIONS

Sample Number	Location	Species	Concentration (CFU/m ³)
2	Room 9190	<i>Aspergillus</i>	18
		<i>Cladosporium</i>	18
		<i>Scopulariopsis</i>	18
		Total:	54
3	Room 9121	<i>Cladosporium</i>	18
		<i>Monocillium</i>	18
		<i>Sterile fungi</i>	18
		Total:	54
5	Room 9138	<i>Cladosporium</i>	54
		<i>Epicoccum</i>	18
		<i>Penicillium</i>	18
		<i>Sporothrix</i>	36
		Total:	125
7	Ambient	<i>Basidiomycetes</i>	36
		<i>Cladosporium</i>	268
		<i>Pithomyces</i>	36
		<i>Phoma</i>	125
		Total:	464

4. CONCLUSIONS

1. The visual inspection of Room 9190, Room 9121, and Room 9138 did not show any signs of mold growth on the walls, ceilings or carpets. Tidewater did not detect any significant odors emanating from Room 9190, Room 9121 and Room 9138 during the inspection. An inspection of the filters of the air conditioning unit in Room 9121 indicated that the filters contained excessive levels of dust;
2. The temperature levels in Room 9190 and Room 9138 were within the guideline of 73°F and 79°F recommended by ASHRAE for summer months. The temperature levels in Room 9121 were above 79°F. However this should not be of concern as Room 9121 is a photocopy room and therefore is only occupied for short periods of time by the employees;
3. The relative humidity levels in Room 9190, Room 9138 and Room 9121 were within the ASHRAE guideline for relative humidity levels in office environments. The ASHRAE guideline for relative humidity in office environments is between 30-65%;
4. The CO₂ levels in Room 9190, Room 9138 and Room 9121 were within the ASHRAE guideline of 1000ppm;



5. The microbial air sampling results indicated that airborne bacteria levels in the samples taken from Room 9190, Room 9138 and Room 9121 were lower than 500 CFU/m³, which is the threshold level suggested by recently published guidelines from the World Health Organization (WHO). The microbial air sampling results indicated that all of the bacteria species detected in all samples were non-pathogenic and not of concern;
6. The microbial air sampling results indicated that the airborne fungi concentration in Room 9190, Room 9138 and Room 9121 were below 1,000 CFU/m³ which is the threshold level suggested in the OSHA Technical Manual, section III, Chapter 2.

5. RECOMMENDATIONS

1. Consider adjusting the HVAC system supplying Room 9190 to increase the air flow into Room 9190 in order to increase the air circulation in Room 9190;
2. Conduct regular filter changes in the air conditioning unit in Room 9121 to prevent the build up of dust and moisture.
3. Continue good housekeeping measures to ensure that all carpets and horizontal surfaces are regularly cleaned and maintained to provide a clean working environment within Room 9190, Room 9138 and Room 9121.

Tidewater is pleased to have performed this survey and report for GSA. If you have any questions or require any additional information, please call our office at (410) 997-4458.

Sincerely,

TIDEWATER, INC.

Prasad Dissanayake, PE
Project Manager

APPENDIX A
PHOTOS



Photo 1: Room 9190

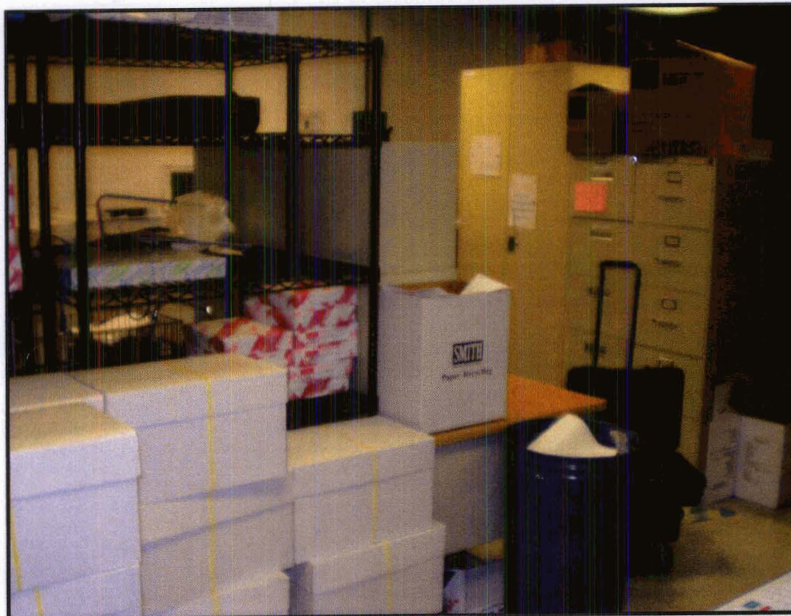


Photo 2: Room 9121

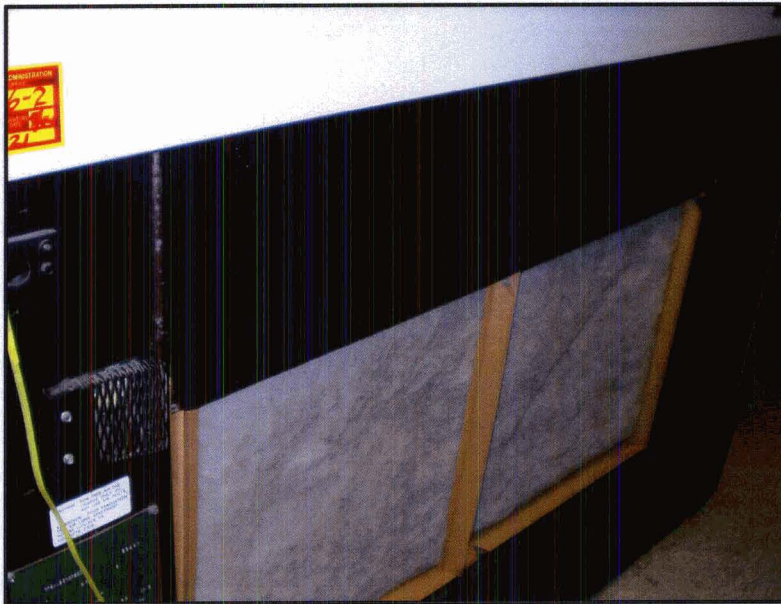


Photo 3: Filter in air conditioning unit in Room 9121

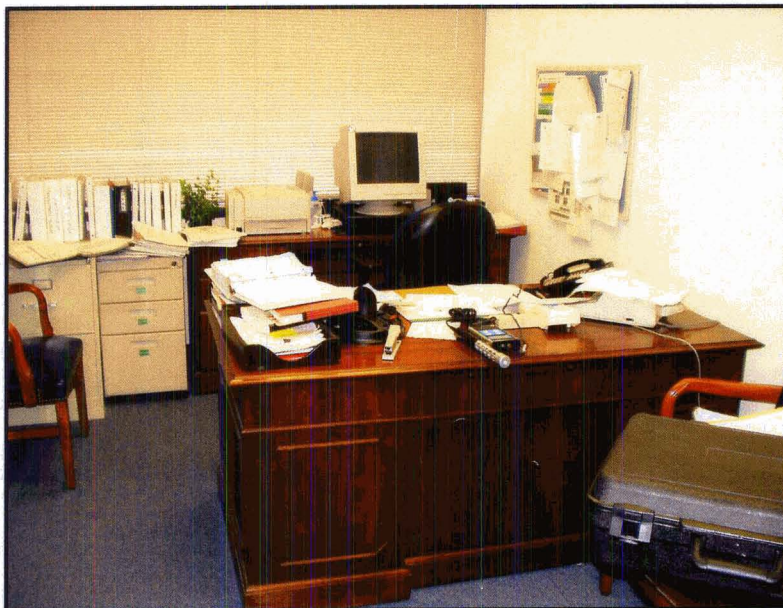


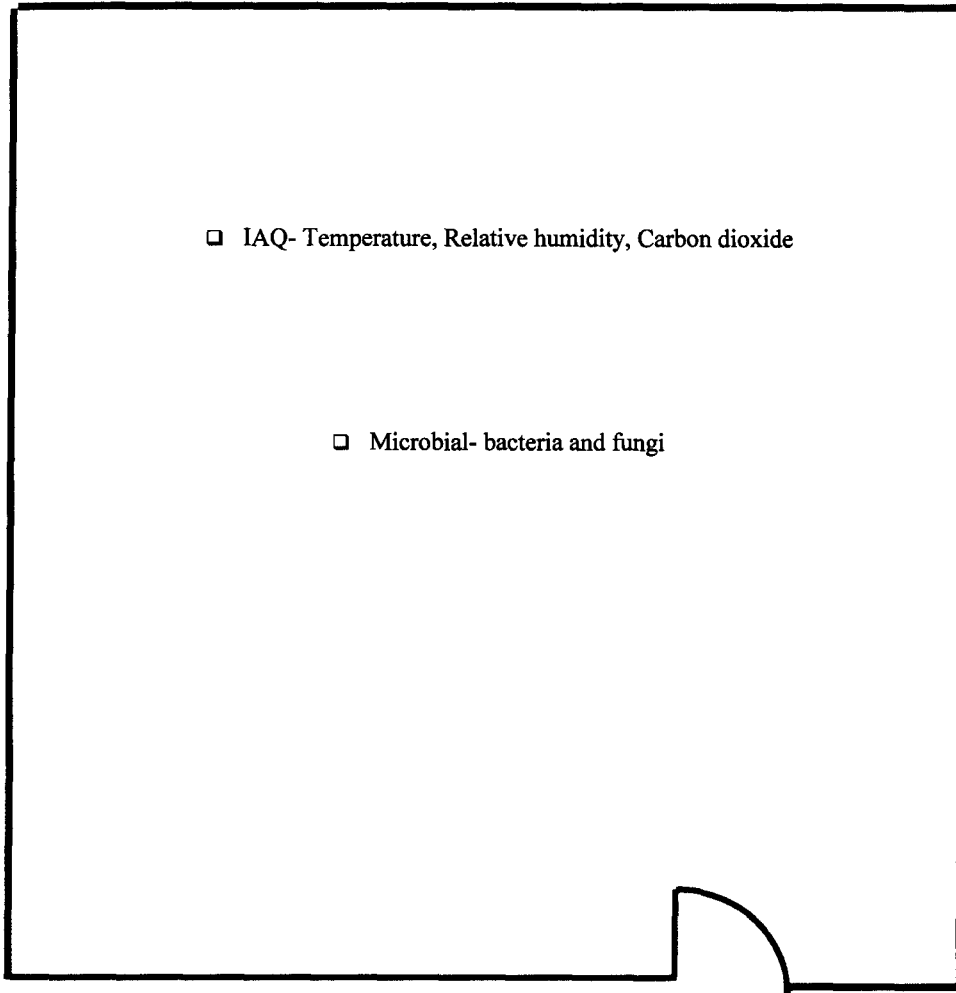
Photo 4: Room 9138

APPENDIX B
SITE MAP-SAMPLING LOCATIONS

Room 9190, Skyline Building
September 15, 2003

☐ IAQ- Temperature, Relative humidity, Carbon dioxide

☐ Microbial- bacteria and fungi



Room 9138, Skyline Building
September 15, 2003

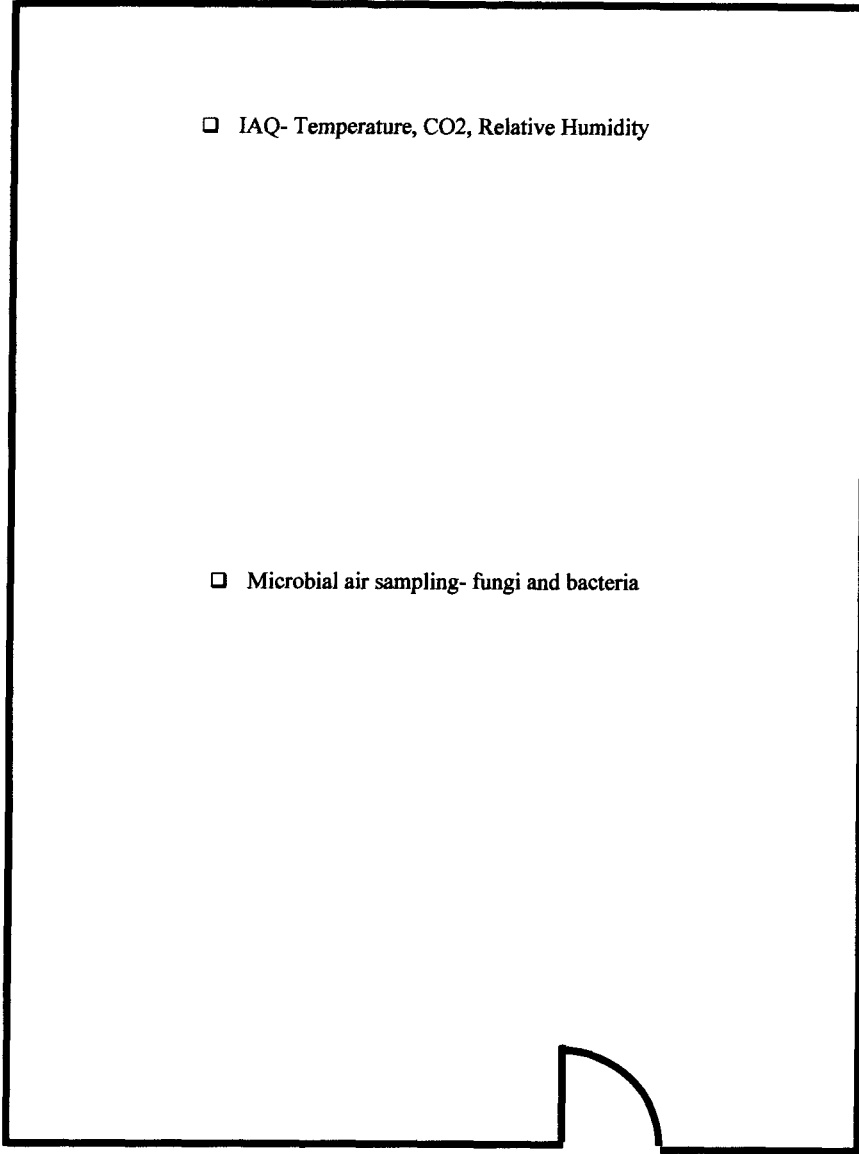
☐ IAQ- Temperature, CO2, Relative Humidity

☐ Microbial air sampling- fungi and bacteria

Room 9121, Skyline Building
September 15, 2003

☐ IAQ- Temperature, CO2, Relative Humidity

☐ Microbial air sampling- fungi and bacteria



APPENDIX C
MICROBIAL LABORATORY ANALYSIS RESULTS

EMSL Analytical, Inc.

10768 Baltimore Ave., Beltsville, MD 20705. Tel.: 301-937-5700/Fax: 937-5701

Client: Tidewater
8950 Route 108, Suite 100
Columbia, MD 21045
Attn: Skanda
Project: 5111 V Bldg

EMSL Reference: 190304878
Date Received: 9/15/2003
Date Analyzed: 9/22/2003
Date Reported: 9/23/2003

EMSL**Fungal/Bacterial Identification Report for Culture Samples**

Sample #	Alr vol (L)	Medium Used	Location	Fungal/Bacterial ID	Colony Counts	Dilution Factor	Conc. (CFU/m ³)*	Percentage (%)**
2	56	MEA	Rm 9190	Fungal				
				Aspergillus	1	1	18	3
				Cladosporium	1		18	3
				Scopulariopsis	1		18	3
							-	-
1	56	TSA/SB	Rm 9190					
3	56	MEA	Rm 9121	Fungal				
				Cladosporium	1	1	18	33
				Monocillium	1		18	33
				Sterile Fungus	1		18	33
							-	-
4	56	TSA/SB	Rm 9121					

* CFU = Colony Forming Unit

** Percentage is of each fungal or bacterial group number in total fungal or bacterial number encountered.

Media type: MEA: 2% malt extract agar with chloramphenicol; TSA/SB: Tryptic-soy agar with 5% sheep blood.

J. B.
Analyst

Approved EMSL Signatory

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AIHA EMPAT PARTICIPANT LAB # 102891

Page 1 of 2

EMSL Analytical, Inc.

10768 Baltimore Ave., Beltsville, MD 20705. Tel.: 301-937-5700/Fax: 937-5701

Client: Tidewater
8950 Route 108, Suite 100
Columbia, MD 21045
Attn: Skanda
Project: 5111 V Bldg

EMSL Reference: 190304878

Date Received: 9/15/2003

Date Analyzed: 9/22/2003

Date Reported: 9/23/2003

EMSL**Fungal/Bacterial Identification Report for Culture Samples**

Sample #	Air vol (L)	Medium Used	Location	Fungal/Bacterial ID	Colony Counts	Dilution Factor	Conc. (CFU/m ³)*	Percentage (%**)
5	56	MEA	Rm 9138	Fungal Cladosporium Epicoecum Penicillium Sporothrix	3 1 1 2	1	54 18 18 36	4 1 1 2
						Total	125	
6	56	TSA/SB	Rm 9138	Bacteria Corynebacterium species Bacillus species Micrococcus species Staphylococcus species	1 2 2 3	1	18 36 36 54	13 25 25 38
						Total	143	
7	56	MEA	Ambient	Fungal Basidiomycetes Cladosporium Pithomyces Phoma	2 15 2 7	1	36 268 36 125	3 38 3 27
						Total	464	
8	56	TSA/SB	Ambient	Bacteria Staphylococcus species	3	1	54	100
						Total	54	

* CFU = Colony Forming Unit

** Percentage is of each fungal or bacterial group number in total fungal or bacterial number encountered.

Media type: MEA: 2% malt extract agar with chloramphenicol; TSA/SB: Tryptic soy agar with 5% sheep blood.

J. B.
Analyst

Approved EMSL Signatory

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AIHA EMPAT PARTICIPANT LAB # 102891

Page 2 of 2

Syline V Abatement update 1

I would like to take this opportunity to inform all contacts involved with the the 9th floor Air Quality Abatement process currently being performed by Charles E. Smith, that I will take on the role as Chief Communicator for this project. Thru email I plan to keep all contacts updated on a as need basis. My role will involve ensuring that effective communication reaches all contacts, that all new information will be shared timely, that GSA will respond to inquires, questions and concerns on a timely basis. I have called all contacts to obtain their email address. The rooms associated with the Skyline V abatement located on the 9th floor are rooms **9111-9112-9113-9187A-9187B-9188-9190-9186-9189 and 9182.**

GSA is working closely with Charles E. Smith, DoD and DISA and will continue to do so until the abatement/leak repairs are completed. To date the Air Quality testing performed by Tidewater on 9-15-03 at the request of GSA have been reviewed by Trish Gretskey (GSA Safety Office). Airborne Fungi Concentrations, commonly associated with water leaks are below the Ambient Level noted in the Tidewater Air Quality Report.

The Tidewater report concluded that room 9121 had excessive levels of dust on the filters associated with the air-conditioning unit in that area. Temperature, Relative Humidity and CO2 levels in the rooms 9190,9121 and 9138 referenced on page 5 section 4, under conclusions were within ASRAE Guidelines with exception to room 9121 which is used a photocopy room and the reported temperature was 79 degrees Fahrenheit. The airborne fungi concentrations as summarized in table three of the Tidewater Report summarized that fungi air concentration over 1,000 CFU/m3 may suggest possible indoor sources of fungi or poor filtration in the HVAC system.

A fungi concentration of 1,000 CFUm3 is the threshold level suggested in the OSHA Technical Manual, section III, Chapter 2. The microbial air sampling results indicated that the airborne fungi concentrations in Room 9190, Room 9121, and Room 9138 were lower than 1,000 CFU/m3. The Genus Aspergillus was detected at relatively low concentrations in the sample taken from Room 9190. At significant concentrations Aspergillus species can cause respiratory irritations in sensitized individuals. However, since Aspergillus was detected at relatively low concentrations in room 9190 the presence of this species should not be of a concern.

Scott Mead and Bill Lane with (Charles E. Smith) met with their contractors today at 3:00 p.m. to discuss the water leaks, actions taken, availability of the Smith Air Quality Report, moisture test results and the number one question "Where do we go from here"? This report should include retesting of the rooms impacted by the water damage. Scott indicated in his conversation with me today that he will have a report to me by Thursday, 10-16-03 or no later than 10-17-03 if there is a delay.

I have received a report from the Skyline Customer Service Center (David Polk/Curtis Thomas) indicating what repairs have/have not been completed per their inspection today on 10-14-03. Curtis Thomas and Jerome Montgomery will perform an early morning inspection directly following the rain tonight to determine if the repairs made by Smith prevented rain water from entering the 9th floor office suites.

I will review and compare the Smith report to the report provided by David Polk and compile a summary review of both reports which I will share with all contacts. I will submit my findings to TC Hairston (Contracting Officer) for his review and TC will provide appropriate action.

I would like to recommend that if DISA has an employee that is experiencing discomfort possibly relating to the conditions of their space then the Agency will have to make the decision to relocate that employee until such time that all problems relating to water leaks on the 9th floor have been successfully remediated.

I look forward to working with you to resolve the air quality concerns at the Skyline V Building. My cell number is 202-438-8491.



Michael J. Castle

10/15/2003 02:25 PM

To: Garner W. Duvall/WPD/RW/GSA/GOV@GSA, Douglas G. Benton/WPD/RW/GSA/GOV@GSA, John P. Allen/WPD/RW/GSA/GOV@GSA, TC Hairston/WPD/RW/GSA/GOV@GSA, Patricia L. Gretskey/WPY/RW/GSA/GOV@GSA, lproctor@ref.whs.mil, vabsher@ref.whs.mil, bariles@ncr.disa.mil, boydij@ncr.disa.mil, william.lane@cescr.com, scott.mead@cescr.com, sterns@ncr.disa.mil, David C. Polk/WPD/RW/GSA/GOV@GSA, Curtis Thomas/WPD/RW/GSA/GOV@GSA, Curtis Thomas/WPD/RW/GSA/GOV@GSA

cc:

Subject: Skyline V Abatement update 1

Please review attachment titled Skyline V Abatement update 1.

Curtis Thomas and Jerome Montgomery of my staff conducted a follow-up inspection on 10-15-03 of the 9th floor at Skyline V Building directly following the rain on 10-14-03. GSA's inspection revealed the following: Room 9190_ no leaks, Room 9189_ water visible on the venetian blinds, 9188_ no leaks, 9187A_ no leaks, 9187B_ no leaks, 9186_ no leaks, 9183_ water visible on the light fixture, 9182_ water visible and smell of mold, 9181_ no leaks, 9113_ no leaks, 9112_ no leaks, 9111_ damp wall where recent repairs were performed by Charles E. Smith.

I reported this information to Bill Lane on 10-15-03.
Again, my cell number is 202-438-8491.



Syline V Abatement update 1.d

Michael J. Castle
Team Leader
202-438-8491

"We help Federal agencies better serve the public by offering, at best value, superior workplaces, expert solutions, acquisition services and management policies."

October 17, 2003

From: Bill Lane, Property Manager Skylines 4, 5, 6

Bill Lane

To: Mike Castle, GSA

RE: Skyline 5 Suite 900 Air Sampling of October 7 Results

Mike, attached are three lab analysis sheets. Our test subject was room 9189 and we used room 9176 and the outdoors as comparisons. From this analysis we conclude there are no elevated microbial levels in this area. Below are the specific results:

Outdoor Test: 720 Spores/M3 (spores per cubic meter)

Room 9176: 70 Spores/M3

Room 9189: 10 Spores/M3

Please call me if I can be of further service at (703) 284-7664.

*Trish
Gretsky
9 pages*



ASSOCIATES, INCORPORATED
MICROBIOLOGY SPECIALISTS

Certificate of Laboratory Analysis

Consolidated Engineering Services
320 23rd Street, South Suite 100
Arlington, VA 22202

Date Received: 10/8/2003
Date Reported: 10/10/2003
Page 2 of 4
Job ID: 03 6133

Attn:

Project: Skyline 5-9189

Condition of Sample: Acceptable

Client Sample Number: Sky5-9189

Lab Sample Number: 03 6133-02

Sampling Location: Skyline 5-Office 9189

Date Collected: 10/7/2003

Volume/Area: 100 L

TEST REQUESTED: 1054 NON-VIABLE, Spore Trap Analysis

SPORE IDENTIFICATION	RESULTS	UNITS
Cladosporium		Spores/m ³
Ascospores	10	Spores/m ³
Basidiospores		Spores/m ³
Smuts, Periconia, Myxomycetes		Spores/m ³
Penicillium/Aspergillus group		Spores/m ³
Alternaria		Spores/m ³
Drechslera / Bipolaris group		Spores/m ³
Colorless		Spores/m ³
Arthrinium		Spores/m ³
Curvularia		Spores/m ³
Stachybotrys		Spores/m ³
Trichocladium		Spores/m ³
Unknown		Spores/m ³
Hyphal Elements		Spores/m ³
Torula herbarum		Spores/m ³
Geotrichum		Spores/m ³
Epicoecum		Spores/m ³
Pithomyces		Spores/m ³
Chaetomium		Spores/m ³
Ulocladium		Spores/m ³
Rusts		Spores/m ³
Clear brown		Spores/m ³

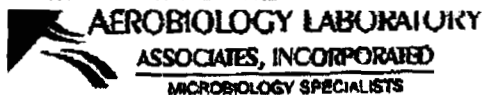
TOTAL SPORES: 10 Spores/m³

Detection Limits: 10 Spores/m³

Date Analyzed: 10/10/2003

Analyst: Jane P. Gardner, MHS, MT (ASCP)

11800 Sunrise Valley Drive • Suite 300 • Reston, Virginia 20191 • (703) 648-9150



Certificate of Laboratory Analysis

Consolidated Engineering Services
320 23rd Street, South Suite 100
Arlington, VA 22202

Date Received: 10/8/2003
Date Reported: 10/10/2003
Page 1 of 4
Job ID: 03 6133

Attn:

Project: Skyline 5-9189

Condition of Sample: Acceptable

Client Sample Number: Sky5-9176 Lab Sample Number: 03 6133-01

Sampling Location: Skyline 5 Office 9176 Non Complaint Area

Date Collected: 10/7/2003 Volume/Area: 100 L

TEST REQUESTED: 1064 NON-VIABLE, Spore Trap Analysis

SPORE IDENTIFICATION	RESULTS	UNITS
Cladosporium		Spores/m ³
Ascospores		Spores/m ³
Basidiospores		Spores/m ³
Smuts, Periconia, Myxomycetes	10	Spores/m ³
Penicillium/Aspergillus group	60	Spores/m ³
Alternaria		Spores/m ³
Drachalera / Bipolaris group		Spores/m ³
Colorless	/	Spores/m ³
Arthrinium		Spores/m ³
Curvularia		Spores/m ³
Stachybotrys		Spores/m ³
Trichocladium		Spores/m ³
Unknown		Spores/m ³
Hypheal Elements		Spores/m ³
Torula herbarum		Spores/m ³
Geotrichum		Spores/m ³
Epicoccum		Spores/m ³
Phthomyces		Spores/m ³
Chaetomium		Spores/m ³
Ulocladium		Spores/m ³
Rusts:		Spores/m ³
Clear brown		Spores/m ³

TOTAL SPORES: 70 Spores/m³

Detection Limits: 10 Spores/m³

Date Analyzed: 10/10/2003

Analyst: Jane P. Gardner, MHS, MT (ASCP)

11800 Sunrise Valley Drive • Suite 300 • Reston, Virginia 20191 • (703) 648-9150



Certificate of Laboratory Analysis

Consolidated Engineering Services

320 23rd Street, South Suite 100

Arlington, VA 22202

Attn:

Project: Skyline 5-9189

Condition of Sample: Acceptable

Date Received: 10/8/2003

Date Reported: 10/10/2003

Page 3 of 4

Job ID: 03 6133

Client Sample Number: Sky5-OUT

Lab Sample Number: 03 6133-03

Sampling Location: Outside-Courtyard

Date Collected: 10/7/2003

Volume/Area: 100 L

TEST REQUESTED: 1054 NON-VIABLE, Spore Trap Analysis

<u>SPORE IDENTIFICATION</u>	<u>RESULTS</u>	<u>UNITS</u>
Cladosporium	180	Spores/m ³
Ascospores	150	Spores/m ³
Basidiospores	120	Spores/m ³
Smuts, Periconia, Myxomycetes	90	Spores/m ³
Penicillium/Aspergillus group		Spores/m ³
Alternaria	10	Spores/m ³
Dothidea / Bipolaris group	10	Spores/m ³
Colorless	60	Spores/m ³
Arthrinium	10	Spores/m ³
Curvularia		Spores/m ³
Stachybotrys		Spores/m ³
Polythrincium	10	Spores/m ³
Unknown		Spores/m ³
Hypheal Elements	30	Spores/m ³
Torula herbarum		Spores/m ³
Geotrichum		Spores/m ³
Epicoccum		Spores/m ³
Phthomyces	40	Spores/m ³
Chaetomium		Spores/m ³
Ulocladium		Spores/m ³
Rusts		Spores/m ³
Clear brown	10	Spores/m ³

TOTAL SPORES: 720 Spores/m³

Detection Limits: 10 Spores/m³

Date Analyzed: 10/10/2003

Analyst: Jane P. Gardner, MHS, MT (ASCP)

11800 Sunrise Valley Drive • Suite 300 • Reston, Virginia 20191 • (703) 648-9150

1
Mr. MICHAEL J. CASTLE
BRANCH CHIEF
Metropolitan Service CENTER (WPD)
GSA, National Capital Region
FAX # 202-219-1623

Fax

To: Linda Proctor	
Of: DOD	
Fax: 703-681-7780	Pages: 1 of 5
Phone: 703-681-7711	Date: 10-16-03
Re: Skyline 5 Abatement 9/14/03	

☐ Urgent ☒ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

Comments: Linda, Vicky I'm in my office
on 202-219-0323 IF you care to discuss
the Smith memo. I'm reviewing all information
and have already formatted a response
to you. I will have a written response
no later than tomorrow, 10-17-03.
My response will summarize the Smith
memo, Dave Polks inspection of the 10 offices
Following the Rain on 10-14-03 and your recent
memo. Thanks Mike Castle, 12:15 PM on
10-16-03

1099 14TH ST. NW, SUITE 200W, WASHINGTON, D.C. 20005
OFFICE: (202) 219-0323 FAX: (202) 219-0902

PRIORITY
10-16-03



CHARLES E. SMITH COMMERCIAL REALTY
5201 LEEHURST PIKE • SUITE 101 • FALLS CHURCH, VIRGINIA 22041
703-284-7666 • FACSIMILE 703-820-8978

October 15, 2003

Mr. Mike Castle
General Services Administration
Fax: (202) 219-0902

RE: Skyline 5 Suite 900 Water Leak of September 23, 20003

Dear Mr. Castle:

Per your request, we have compiled this summary of the restorative actions for the impacted area of Suite 900 and the status of the investigation as to the cause of the leak of Tuesday September 23, 2003.

Restoration:

- a. Carpets were extraction cleaned September 23 using a sanitizer to inhibit mold and other microbial growth.
- b. Vinyl cove base was removed in rooms 9182, 9186, 9187A, 9187B, 9188, 9189. Carpet drying fans were employed to speed the drying process. In order to make sure we did not overlook sections of cove base needed to be removed we used a moisture meter to survey all areas where the carpet became wet. Once cove base was removed small openings were cut at the base of the wall board base to facilitate drying inside the walls.
- c. Some sections of exterior wall insulation were replaced. Other sections of wall insulation were dried out and inspected for thorough drying Monday September 30.
- d. We found a 1 sq. ft. section of mold in the wall board of room 9182. This partition wall was previously installed to overlap the window mullion about 4 inches, inhibiting drying. This section of wall board was cut out and replaced so as to tie into the window frame.
- e. We cut several small openings in wall board in the rooms above to inspect for mold and excessive moisture behind the wall board and found none. These openings have been filled, faired and painted.
- f. All wall board was dry to my touch when I inspected the area Friday September 26. An environmental engineer surveyed the area for moisture in walls, carpet and areas behind walls on Wednesday October 1, 2003, using a moisture meter. All areas were determined to be dry. This moisture survey not only covered the 5 rooms that had carpets soaked from the leak of September 23 but surveyed exterior walls of rooms 9181, 9113, 9112, 9111, 9110.



- g. As a precaution, we had the environmental engineer take an air samples in room 9189 on October 7. We expect to have the results in one week and the engineer had no visible sign indicating that this survey will show elevated levels of mold or other microbes in the atmosphere of this room.
- h. Cove base was reinstalled after the environmental engineer's moisture survey and walls were touched up and painted.

Cause:

We originally believed the penthouse roof, directly above the rooms receiving the heaviest amount of water, to be at fault for the leak. We did several test cuts in the roof in the area above the area experiencing the greatest leak and found the inner insulation of the roof to be completely dry. In other words the penthouse roof appears to be intact.

We have evaluated that exterior wall caulking is part of the cause of the leak, and room 9189 had some minor window leaks from the hurricane September 19. We hose tested the area receiving the heaviest leak September 30 and we did get some small water intrusion. Based on that, we will replace all caulk joints and window glazing on the side of the building along the east court yard. Because we have experience where the pre-cast exterior rough texture sometimes inhibits satisfactory adhesion of the caulk to the surface, we will grind the surfaces smooth before the caulk is applied. This project is scheduled to begin October 17 and will take about 2 weeks to complete.

Also partially contributing to the leak is the air intake plenum roof, directly above the area receiving the heaviest leakage. While this plenum roof is only 3 years old and there is a drain in this area to prevent overflow, we believe a high volume of water cascaded from the penthouse roof above. Because the roof drain was overcome to such an extent during this torrential rain, the drain backed up and water rose above the flashing. To make sure the drain is functioning as designed, a plumber ran a camera down the drain and found all conditions to be clear. To prevent this drain from becoming overcome by a torrential rain in the future we have scheduled installation of a 4 inch high flashed curb on the penthouse roof around the air intakes. This is scheduled to be complete October 24.

We also have re-flashed all penthouse roof combings as a measure to make sure all is intact, although inspection of these areas revealed no problems.

Per your telephone call today, I inspected rooms 9189, 9183, 9182 and 9111. Here is what I found:

Room 9189: Minor water leak around window. Assess the leak is from exterior caulking and the repair is addressed above.

Room 9183: Leak on ceiling light lens. Crack in the concrete slab above is leaking small amounts of water. This slab system consists on a floating slab resting on top of the structural slab and small amounts of water previously sandwiched between these slabs

200 ②

NOVA PMC

202 219 1623

08:24 10/22/03

600 ②

NOVA PMC

202 219 1623

08:26 10/22/03



VA0246

11800 Sunrise Valley Drive, Suite 1200
Reston, Virginia 20191

(703) 648-0822
FAX (703) 648-0575

November 14, 2000

Ms. Normajean P. Eleazer
General Services Administration
Contracting Officer's Representative
National Capital Regional Office Building
WPYG - Room 2080
7th & D. Street, S.W.
Washington, D.C. 20407

RE: Microbial Sampling Report, Skyline V Building, Suite 105
Contract Number GS11P99YAD0719, Order Number P-11-00-DC-0407

Dear Ms. Eleazer:

Applied Environmental, Inc. conducted microbial air sampling in Suite 105 of the Skyline V Building, located at 5111 Leesburg Pike, Falls Church, Virginia. The survey was performed on October 16, 2000, and consisted of air sampling to determine the concentrations of viable bacteria and fungi. Surface and bulk sampling was also performed to measure bacterial and fungal concentrations in selected locations.

The survey was performed following repeated episodes of water incursion in the space resulting from leaks associated with the operation of the landscaping irrigation system.

SUMMARY

The criteria used to evaluate the survey results include standards and guidelines referenced by the Occupational Safety and Health Administration (OSHA), the American Society for Heating, Refrigerating, and Air Conditioning Engineers, Inc. (ASHRAE), the American Conference of Governmental Industrial Hygienists (ACGIH), the U.S. Environmental Protection Agency (EPA), the National Institute for Occupational Safety and Health (NIOSH), and other applicable industry guidelines.

The bacterial and fungal air sampling indicated low concentrations of bacteria and fungi that were consistent with or slightly above the outdoor concentrations. Bacterial surface sampling results from the wipe sampling of surfaces below carpeting were elevated. The predominant bacteria isolated in each sample were multiple nonfermentative gram-negative rods. These organisms are indicative of water incursion from environmental reservoirs, and were being selectively amplified indoors. A bulk

sample of carpeting collected also indicated an elevated concentration of the same bacterial organisms, indicating that the carpeting is acting as a bioamplification reservoirs. No *Stachybotrys* was isolated in any of the samples.

Visible water damage and microbial growth was observed on gypsum wallboard below the windows within the room. In addition, visible water damage was observed on some of the wood furniture in Ms. Janis Hoy's office.

SURVEY METHODS

Few legally enforceable standards exist governing the acceptable levels of airborne pollutants or other contaminants within a non-industrial building. Typically, interpretation of air sampling data obtained in IAQ evaluations is based on the guidelines and recommendations that have been developed for an indoor environment by various recognized technical associations and groups. These include the ACGIH, ASHRAE, and NIOSH.

Sampling was accomplished in accordance with procedures established by OSHA, NIOSH, the American Industrial Hygiene Association (AIHA), and current industry standards. An assessment of the collected data was made in accordance with non-regulatory standards for IAQ developed by ASHRAE and with other criteria as appropriate.

Microbial air samples were collected using an N6 stage Andersen viable sieve impactor or equivalent. Air was drawn through the impactor using a pre-calibrated GAST electric high-volume sampling pump at a rate of 28.3 liters per minute. Trypticase soy agar media is used for bacterial samples and modified malt extract agar for fungal samples. The wipe samples were collected using *Culturette II* rayon-tipped sampling swabs and transport systems manufactured by Becton Dickinson Microbiology Systems. Each swab was used to wipe a known area of the surface to be sampled and was then stored in a modified Stuart's bacterial transport medium during handling and transport to the laboratory. The bulk sample was collected by removing a portion of the material and placing it into a sterile sampling container. Analyses of the microbial samples were performed in accordance with standard medical/public health microbiological isolation and characterization techniques and NIOSH Method 501 (draft document). The samples were analyzed to identify the concentrations of viable bacterial and fungal organisms present in total colony forming units per cubic meter of air (cfu/m³), in colony forming units per square inch (cfu/in²) of surface area for surface samples, and in colony forming units per gram of material (cfu/g) for bulk samples.

The microbial samples were analyzed by Aerobiology Laboratory Associates, Inc., of Reston, Virginia.

A discussion of the evaluation criteria and the results for each parameter measured are presented below.

SURVEY FINDINGS

Microbial - General Guidelines

Microorganisms and other biological contaminants have been associated with various allergic responses including asthma attacks, hypersensitivity responses (hypersensitivity pneumonitis, humidifier fever, allergic rhinitis etc.) and illnesses such as legionellosis, Legionnaire's disease, and Pontiac Fever. Symptoms can include chills, fever, muscle aches, chest tightness, headache, cough, sore throat, diarrhea, and nausea. Sources of microbial contaminants can include air handling system condensate, cooling towers, water-damaged building materials, high indoor humidity, damp organic materials, and porous wet surfaces. The presence of moisture or water in combination with organic materials can support the growth of microorganisms. Microbial contamination within a building ventilation system is also of concern due to the potential for the system to circulate microorganisms to non-source areas (e.g., areas without water damage or reservoirs).

The ACGIH *Bioaerosols, Assessment and Control, 1999*, provides guidance on investigation, sampling, assessment, and remedial actions. This document identifies microorganisms currently associated with Building Related Illness (BRI), but does not provide any criteria for acceptable airborne concentrations or surface contamination levels. Emphasis is placed on identification of species, conditions found at the site, and symptoms reported by the affected individuals. "ACGIH does not support any existing numerical criteria for interpreting data on biological agents from source or air samples in non-manufacturing environments."

There are no federal OSHA standards regulating exposure to microorganisms in the work place. The OSHA *Technical Manual, Chapter 6 - Indoor Air Quality Investigation, issued by OSHA Instruction CPL-2-2.20B, CH-1, November 13, 1990*, provides a value of 1,000 viable cfu/m³, 1,000,000 cfu/gram of fungi in dust or material, and 10,000 cfu/milliliter of stagnant water or slime as contamination indicators.

It should be noted that levels in excess of these concentrations do not necessarily imply that the conditions are unsafe or hazardous. A determination of the types and concentrations of airborne microorganisms is necessary to fully evaluate the hazard to employees. However, as previously indicated, this level does not correlate directly with airborne levels that are of health concern because of the wide variety of microorganisms that can be found in buildings. In several cases where a large number of people have exhibited illnesses that were associated with microbial exposure, the levels of bacteria and fungi have usually been more than 2,000 cfu/m³ of air. It should be noted that during growing seasons, outdoor fungal spore levels can range from 1,000 cfu/m³ to 100,000 cfu/m³ of air. Adverse health effects associated with exposure to microbial organisms are a function of many factors, of which concentration and types of organisms are major considerations. In most cases where the airborne concentration of viable microbes is low, adverse health consequences of exposure

to bioaerosols are observed only in hypersensitive individuals, such as persons with known allergy histories, or in individuals with compromised immune systems. When present, the reactions of such individuals tend to become more severe with increasing exposure.

In assessing potential microbial exposures, it is important to note that individual microbial measurements provide a limited view of true exposure due to the fact that levels can fluctuate widely over time and under varying conditions. In addition, dead cells and cell fragments, proteins, metabolites and volatile organic compounds produced by microbes may also be responsible for adverse health effects.

Confirmation of actual health effects resulting from exposure to a microbial agent must be based on medical findings in conjunction with survey test results.

Microbial Sampling

The results of the microbial sampling are provided in the following data table:

Sample Number & Location	Sample Type	Result	Organisms Isolated
SFFM001016 – 01 Suite 105, Table adj. To Copier (Unaffected area)	Bacteria, Air w/ IDs	200 cfu/m ³	Coag-negative Staphylococcus (48%) Micrococcus species (37%) Bacillus species (8%) Multi. nonfermentative gram-neg rods (7%) No Stachybotrys isolated.
	Fungi, Air w/ IDs	200 cfu/m ³	Cladosporium species (48%) Penicillium species (26%) Acremonium (Cephalosporium) species (19%) Paecilomyces species (4%) Sterilia mycelia (3%)
SFFM001016 – 02 Suite 105, Mr. Bernier's Office (Affected area)	Bacteria, Air w/ IDs	240 cfu/m ³	Coag-negative Staphylococcus (52%) Multi. nonfermentative gram-neg rods (27%) Micrococcus species (18%) Bacillus species (3%) No Stachybotrys isolated.
	Fungi, Air w/ IDs	240 cfu/m ³	Cladosporium species (74%) Penicillium species (18%) Paecilomyces species (3%) Acremonium (Cephalosporium) species (3%) Sterilia mycelia (2%)

Sample Number & Location	Sample Type	Result	Organisms Isolated
SFFM001016 – 03 Suite 105, Ms. Hoy's Cubicle (Affected area)	Bacteria, Air w/ IDs	130 cfu/m ³	Coag-negative Staphylococcus (67%) Micrococcus species (22%) Bacillus species (6%) Non-fermentative gram-neg rod (5%) No Stachybotrys isolated.
	Fungi, Air w/ IDs	100 cfu/m ³	Cladosporium species (73%) Sterilia mycelia (17%)
SFFM001016 – 04 Outside Front Entrance to Skyline V	Bacteria, Air w/ IDs	150 cfu/m ³	Bacillus species (78%) Coag-negative Staphylococcus (10%) Corynebacterium species (10%) Micrococcus species (2%) No Stachybotrys isolated.
	Fungi, Air w/ IDs	100 cfu/m ³	Cladosporium species (82%) Penicillium species (14%) Sterilia mycelia (2%) Paecilomyces species (2%)
SFFM001016 – 05 Below carpeting @ Seam, Ms. Hoy's Cubicle	Bacteria, Wipe w/ IDs	1,200 cfu/in ²	Multi. nonfermentative gram-neg rods (63%) Bacillus species (27%) No Stachybotrys isolated.
	Fungi, Wipe w/ IDs	10 cfu/in ²	Cladosporium species (100%)
SFFM001016 – 06 Below Carpeting, Elinor Emmon's Cubicle	Bacteria, Wipe w/ IDs	51,000 cfu/in ²	Multi. nonfermentative gram-neg rod (73%) Bacillus species (14%) Coag-negative Staphylococcus (8%) Corynebacterium species (5%) No Stachybotrys isolated.
	Fungi, Wipe w/ IDs	200 cfu/in ²	Cladosporium species (85%) Penicillium species (15%)
SFFM001016 – 07 Carpeting @ Seam, Ms. Hoy's Cubicle	Bacteria, Bulk w/ IDs	780,000 cfu/g	Multi. nonfermentative gram-neg rod (73%) Coag-negative Staphylococcus (8%) Bacillus species (14%)
	Fungi, Bulk w/ IDs	4,200 cfu/g	Cladosporium species (90%) Rhodotorula species (5%) Sterilia mycelia (5%)
SFFM001016 – 08 Blank	Bacteria, Air w/ IDs	No Growth	Not applicable.
	Fungi, Air w/ IDs	No Growth	Not applicable

DISCUSSION AND RECOMMENDATIONS

The results of the sampling indicated that the carpeting within the area was acting as a bioamplification reservoir at the time of the survey. Additionally, the water incursion is likely to have promoted the visible microbial growth on the gypsum wallboard below the windows.

Based upon the sampling data and upon observations made while on-site, the following recommendations are provided:

1. The introduction of water from the irrigation system should be remedied to ensure that further incursion does not occur. It is believed that remedial actions had been performed at the time of the survey.
2. Porous water-damaged building materials and contents that were not dried in a timely fashion should be removed and discarded. These materials include the carpeting within the majority of the suite, gypsum wallboard below the windows and underlying insulation between the wallboard and the building exterior, and furnishings with obvious water-damage.
3. Non-porous building materials that were wet should be thoroughly cleaned and disinfected.

The laboratory data sheets are attached for your reference. Descriptions of some commonly isolated bacteria and fungi are also provided.

If you have any questions or require further assistance, please feel free to call.

Sincerely,

(b) (6)

Francis W. McGrail IV
Division Manager
Indoor Air Quality Services

Attachments

Ref. No. 1046-00-0549

ATTACHMENT A
LABORATORY DATA SHEETS

Certificate of Laboratory Analysis

Applied Environmental, Inc.
11800 Sunrise Valley Dr., Suite 1200
Reston, VA 20191

Attn:

Project: 1046-00-0549

Skyline V Suite 105

Date Received: 10/16/00

Date Reported: 10/25/00

Page 1 of 8

Job ID: 20 1541

Client Sample Number:	SFFM001016-01	Lab Sample Number:	20 1541-01
Sampling Location:	Suite 105, Table Adj. to Copier (unaffected)		
Date Collected:	10/16/00	Volume/Area:	141.5 L

TEST REQUESTED: 1005 AIR, Total BACTERIAL Count w/Identifications
1038 AIR, Stachybotrys Culture & Total Fungal Count

Total BACTERIAL Count: 200 cfu/m³

BACTERIA Isolated:	Coag-negative Staphylococcus species	48%
	Micrococcus species	37%
	Bacillus species	8%
	Multiple nonfermentative gram-neg rods	7%

Detection Limits: 7 cfu/m³

Date Analyzed: 10/20/00

Analyst: Michael D. Merritt, B.S., B.A.

Results: No Stachybotrys isolated.

Total FUNGAL Count: 200 cfu/m³

FUNGUS Isolated:	Cladosporium species	48%
	Penicillium species	26%
	Acremonium (Cephalosporium) species	19%
	Paecilomyces species	4%
	Sterilia mycelia	3%

Detection Limits: 7 cfu/m²

Date Analyzed: 10/20/00

Analyst: Ann Atkinson, B.S., MT (ASCP)

Certificate of Laboratory Analysis

Applied Environmental, Inc.
11800 Sunrise Valley Dr., Suite 1200
Reston, VA 20191

Attn:

Project: 1046-00-0549

Skyline V Suite 105

Date Received: 10/16/00

Date Reported: 10/25/00

Page 2 of 8

Job ID: 20 1541

Client Sample Number:	SFFM001016-02	Lab Sample Number:	20 1541-02
Sampling Location:	Suite 105, Mr. Bernier's Office (affected)		
Date Collected:	10/16/00	Volume/Area:	141.5 L

TEST REQUESTED: 1005 AIR, Total BACTERIAL Count w/Identifications
1038 AIR, Stachybotrys Culture & Total Fungal Count

Total BACTERIAL Count: 240 cfu/m³

BACTERIA Isolated:	Coag-negative Staphylococcus species	52%
	Multiple nonfermentative gram-neg rods	27%
	Micrococcus species	18%
	Bacillus species	3%

Date Analyzed: 10/20/00

Analyst: Michael D. Merritt, B.S., B.A.

Results: No Stachybotrys isolated.

Total FUNGAL Count: 250 cfu/m³

FUNGUS Isolated:	Cladosporium species	74%
	Penicillium species	18%
	Paecilomyces species	3%
	Acremonium (Cephalosporium) species	3%
	Sterilia mycelia	2%

Detection Limits: 7 cfu/m³

Date Analyzed: 10/20/00

Analyst: Ann Atkinson, B.S., MT (ASCP)

Certificate of Laboratory Analysis

Applied Environmental, Inc.
11800 Sunrise Valley Dr., Suite 1200
Reston, VA 20191

Attn:

Project: 1046-00-0549

Skyline V Suite 105

Date Received: 10/16/00

Date Reported: 10/25/00

Page 3 of 8

Job ID: 20 1541

Client Sample Number:	SFFM001016-03	Lab Sample Number:	20 1541-03
Sampling Location:	Suite 105, Ms. Hoy's Cubicle (affected)		
Date Collected:	10/16/00	Volume/Area:	141.5 L

TEST REQUESTED: 1005 AIR, Total BACTERIAL Count w/Identifications
1038 AIR, Stachybotrys Culture & Total Fungal Count

Total BACTERIAL Count: 130 cfu/m³

BACTERIA Isolated:	Coag-negative Staphylococcus species	67%
	Micrococcus species	22%
	Bacillus species	6%
	Non-fermentative gram neg. rod	5%

Date Analyzed: 10/20/00

Analyst: Michael D. Merritt, B.S., B.A.

Results: No Stachybotrys isolated.

Total FUNGAL Count: 100 cfu/m³

FUNGUS Isolated:	Cladosporium species	73%
	Sterilia mycelia	17%

Detection Limits: 7 cfu/m³

Date Analyzed: 10/20/00

Analyst: Ann Atkinson, B.S., MT (ASCP)

Certificate of Laboratory Analysis

Applied Environmental, Inc.
11800 Sunrise Valley Dr., Suite 1200
Reston, VA 20191

Attn:

Project: 1046-00-0549

Skyline V Suite 105

Date Received: 10/16/00

Date Reported: 10/25/00

Page 4 of 8

Job ID: 20 1541

Client Sample Number:	SFFM001016-4	Lab Sample Number:	20 1541-04
Sampling Location:	Outside Front Entrance to Skyline V		
Date Collected:	10/16/00	Volume/Area:	141.5 L

TEST REQUESTED: 1005 AIR, Total BACTERIAL Count w/Identifications
1038 AIR, Stachybotrys Culture & Total Fungal Count

Total BACTERIAL Count: 150 cfu/m³

BACTERIA Isolated:	Bacillus species	78%
	Coag-negative Staphylococcus species	10%
	Corynebacterium species	10%
	Micrococcus species	2%

Date Analyzed: 10/20/00

Analyst: Michael D. Merritt, B.S., B.A.

Results: No Stachybotrys isolated.

Total FUNGAL Count: 100 cfu/m³

FUNGUS Isolated:	Cladosporium species	82%
	Penicillium species	14%
	Sterilia mycelia	2%
	Paecilomyces species	2%

Detection Limits: 7 cfu/m³

Date Analyzed: 10/20/00

Analyst: Ann Atkinson, B.S., MT (ASCP)

Certificate of Laboratory Analysis

Applied Environmental, Inc.
11800 Sunrise Valley Dr., Suite 1200
Reston, VA 20191

Attn:

Project: 1046-00-0549

Skyline V Suite 105

Date Received: 10/16/00

Date Reported: 10/25/00

Page 5 of 8

Job ID: 20 1541

Client Sample Number:	SFFM001016-5	Lab Sample Number:	20 1541-05
Sampling Location:	Below Carpeting @ Seam, Ms. Hoy's Cubicle		
Date Collected:	10/16/00	Volume/Area:	1 in ²

TEST REQUESTED: 1006 WIPE, Total BACTERIAL Count w/Identifications
1037 WIPE, Stachybotrys Culture & Total Fungal Count

Total BACTERIAL Count: 1200 cfu/in²

BACTERIA Isolated:	Multiple nonfermentative gram-neg rods	63%
	Bacillus species	27%

Date Analyzed: 10/20/00

Analyst: Michael D. Merritt, B.S., B.A.

Results: No Stachybotrys isolated.

Total FUNGAL Count: 10 cfu/in²

FUNGUS Isolated:	Cladosporium species	100%
------------------	----------------------	------

Detection Limits: 10 cfu/in²

Date Analyzed: 10/21/00

Analyst: Ann Atkinson, B.S., MT (ASCP)

Certificate of Laboratory Analysis

Applied Environmental, Inc.
11800 Sunrise Valley Dr., Suite 1200
Reston, VA 20191

Attn:
Project: 1046-00-0549

Skyline V Suite 105

Date Received: 10/16/00

Date Reported: 10/25/00

Page 6 of 8

Job ID: 20 1541

Client Sample Number: SFFM001016-6 **Lab Sample Number:** 20 1541-06

Sampling Location: Below Carpeting, Elinor Emmons' Cubicle

Date Collected: 10/16/00 **Volume/Area:** 1 in²

TEST REQUESTED: 1006 WIPE, Total BACTERIAL Count w/Identifications
1037 WIPE, Stachybotrys Culture & Total Fungal Count

Total BACTERIAL Count: 51,000 cfu/in²

BACTERIA Isolated:

Multiple nonfermentative gram-neg rods	73%
Bacillus species	14%
Coag-negative Staphylococcus species	8%
Corynebacterium species	5%

Detection Limits: 1000 cfu/in²

Date Analyzed: 10/20/00

Analyst: Michael D. Merritt, B.S., B.A.

Results: No Stachybotrys isolated.

Total FUNGAL Count: 200 cfu/in²

FUNGUS Isolated:

Cladosporium species	85%
Penicillium species	15%

Detection Limits: 1 cfu/in²

Date Analyzed: 10/21/00

Analyst: Ann Atkinson, B.S., MT (ASCP)

Certificate of Laboratory Analysis

Applied Environmental, Inc.
11800 Sunrise Valley Dr., Suite 1200
Reston, VA 20191
Attn:
Project: 1046-00-0549
Skyline V Suite 105

Date Received: 10/16/00
Date Reported: 10/25/00
Page 7 of 8
Job ID: 20 1541

Client Sample Number: SFFM001016-7 **Lab Sample Number:** 20 1541-07
Sampling Location: Carpeting @ Seam, Ms Hoy's Cubicle
Date Collected: 10/16/00 **Volume/Area:**

TEST REQUESTED: 1008 BULK, Total BACTERIAL Count w/identifications
1035 BULK, Stachybotrys Culture, Direct Microscopic Exam & Total Fungal

Total BACTERIAL Count: 780,000 cfu/g

BACTERIA Isolated: Multiple nonfermentative gram-neg rods 90%
Coag-negative Staphylococcus species 8%
Bacillus species 2%

Detection Limits: 20,000 cfu/g

Date Analyzed: 10/20/00

Analyst: Michael D. Merritt, B.S., B.A.

Total FUNGAL Count: 4,200 cfu/g

FUNGUS Isolated: Cladosporium species 90%
Rhodotorula species 5%
Sterilia mycelia 5%

Detection Limits: 200 cfu/m

Date Analyzed: 10/20/00

Analyst: Ann Atkinson, B.S., MT (ASCP)

Certificate of Laboratory Analysis

Applied Environmental, Inc.
11800 Sunrise Valley Dr., Suite 1200
Reston, VA 20191

Attn:

Project: 1046-00-0549

Skyline V Suite 105

Date Received: 10/16/00

Date Reported: 10/25/00

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Job ID: 20 1541

Client Sample Number:	SFFM001016-8	Lab Sample Number:	20 1541-08
Sampling Location:	Blank		
Date Collected:	10/16/00	Volume/Area:	0 L

TEST REQUESTED: 1005 AIR, Total BACTERIAL Count w/Identifications
1038 AIR, Stachybotrys Culture & Total Fungal Count

Total BACTERIAL Count: No Growth.

Date Analyzed: 10/20/00

Analyst: Michael D. Merritt, B.S., B.A.

Total FUNGAL Count: No Growth.

Detection Limits: N / A

Date Analyzed: 10/20/00

Analyst: Ann Atkinson, B.S., MT (ASCP)

ATTACHMENT B

DESCRIPTIONS OF COMMON BACTERIA AND FUNGI

DESCRIPTIONS OF COMMON BACTERIA AND FUNGI

The following list provides brief descriptions of some common microbial organisms:

BACTERIA

***Bacillus* species**

The *Bacillus* bacterium is an indicator that an outside source may be contributing to indoor contamination (e.g., water incursion, pipe and sewer leakage). *Bacillus* species (gram-positive) are common in many environments. The spore-forming (endospore) *Bacillus* can survive long periods of dryness, low or elevated temperatures, and other environmental conditions that would be fatal to most other bacteria. The EPA document, *ECAO-R-0315, Indoor Air Assessment - Indoor Biological Pollutants*, states that as a generality, when *Bacillus* species are observed to be dominant in an indoor air environment in high concentrations, it is probable that environmental reservoirs are contaminated. Both EPA and ACGIH documents identify *Bacillus* species as causing and/or suspected of causing, outbreaks of hypersensitivity pneumonitis in the various cases investigated. *Bacillus* species are commonly isolated on interior components of building ventilation systems using outside air.

Chryseomonas luteola

Commonly isolated in environmental cultures, but not often in clinical cultures. *Chryseomonas* is closely related to *Pseudomonas* species, and has been associated with catheter infections, septicemia, peritonitis associated with dialysis, and mixed infections at other sites. These bacteria generally only cause adverse health effects in immunocompromised individuals.

Coagulase negative *Staphylococcus*

Coagulase negative *Staphylococcus* is a normal inhabitant of the skin and nasal passages of humans and is not expected to produce adverse health effects in normally healthy individuals.

***Comamonas* species**

Comamonas species are mainly environmental and reports of infection in humans are rare.

***Corynebacterium* species**

Corynebacterium species are primarily parasites of the mucous membranes or skin of mammals and are commonly found in occupied areas. Some species are pathogenic to mammals, although infection in humans is rare, and is usually only found in individuals with compromised immune systems. As such, they have not been associated with BRI.

Flavimonas oryzae

Flavimonas oryzae (previously named *Pseudomonas oryzae*) are environmental organisms found in water and soil and on plants including fruits and vegetables. They are distributed worldwide. Since they can survive in an aqueous environment they are commonly isolated in clinical cultures. It is not uncommon to isolate them in indoor environments in which ground water leakage has occurred. When gram-negative rods become predominant indoors, it can be assumed that they have resulted from an environmental reservoir, rather than human host (gram-positive) sources. They can cause adverse health effects such as pneumonia in immuno-compromised individuals

***Micrococcus* species**

Micrococcus species are found in the skin and mucous membranes of humans and are typically found indoors in occupied areas. They have not been associated with BRI.

Pseudomonas fluorescens/putida

These *Pseudomonas* are gram negative, non-enteric environmental organisms. It is not uncommon to find them outdoors on organic material, decaying leaves, etc. If present in large quantities indoors, then they indicate an outdoor source with indoor amplification reservoir.

Pseudomonas species occurs occasionally in the outdoor environment on leaf surfaces and are considered a rare inhabitant in the indoor environment. *Pseudomonas* has been associated with pneumonia, but usually afflicts only persons with debilitated immune systems. Bacteria found in the naturally occurring outdoor environment do not usually cause human illness unless they are selectively amplified in an indoor environmental reservoir or their products become airborne and successfully reach the breathing zone of susceptible humans. When gram-negative rods become predominant indoors, it can be assumed that they have resulted from an environmental reservoir, rather than human host (gram-positive) sources.

***Rhodococcus* species**

The genus *Rhodococcus* includes a diverse group of organisms quite variable in morphology, growth patterns, biochemical characteristics, and capacity for causing disease. Organisms in this group are associated with a variety of environmental locations and especially with soil and farm animals. They have often been isolated from feces of herbivores and swine, with fecal contamination significantly increasing the organism's rates of multiplication in soil. They have also been isolated from fresh and marine waters and from the guts of some arthropods. Although members of the genus *Rhodococcus* are infrequently isolated from human clinical specimens, their increasing roles as opportunistic pathogens are becoming more apparent. Infection is typically limited to immunocompromised hosts, especially those with AIDS.

***Shewanella* species**

Shewanella are primarily found in foodstuffs and the environment and only occasionally in human specimens and in clinical samples. *Shewanella putrefaciens* strains have been reported to cause lower limb cellulitis, otitis media, and septicemia.

Sphingomonas paucimobilis is also a gram negative rod, and was previously named as a *Pseudomonas*. (See *Pseudomonas* above.)

Stenotrophomonas maltophilia

Previously known as *Xanthomonas maltophilia* and *Pseudomonas maltophilia*, this bacterium is ubiquitous in nature and has also been isolated from the hospital environment. It is commonly isolated in the laboratory from environmental cultures and has occasionally been associated with septicemia, pneumonia, wound infection, endocarditis, and meningitis in highly immunocompromised individuals (typically in intensive care units and on mechanical respirators).

FUNGI***Alternaria* species**

The fungal species *Alternaria* is a worldwide outdoor mold that flourishes seasonally in warm and humid conditions. Colonies of *Alternaria* are found on textiles and fruits, especially tomatoes, and may be linked to Baker's asthma.

Aspergillus* species, *Aspergillus niger*, *Aspergillus ochraceus

Aspergillus is a fungal species which can cause a condition known as Hypersensitivity Pneumonitis syndrome (a lower lung, allergic-type condition) in susceptible individuals. Hypersensitivity Pneumonitis can occur in certain individuals who become "sensitized" to these organisms over a period of time. In most cases, adverse health consequences of exposure to these organisms are seen only in "hypersensitive" individuals. It has also been reported that non-viable cell products and VOCs are believed to be responsible for some adverse health effects. *Aspergillus niger* is considered an "opportunistic pathogen" (disease-causing agent). Normally, individuals have a high degree of immunity to this microbe, however, individuals whose immune systems are compromised by certain medical conditions are more susceptible to infection. The organism can cause a lung disease known as Aspergillosis (a fungal lung infection) and is the usual cause of a sinus infection known as otomycosis. *Aspergillus* is unique as it thrives in warm temperatures (>40°) and, therefore, its growth peaks with indoor heating (e.g., in autumn and winter). It is commonly culturable from house basements, bedding, house dust and raw textiles on upholstered furniture. Inhaled spores can lead to several well-defined diseases: allergic asthma, hypersensitivity pneumonitis, invasive aspergillosis, aspergilloma (fungus ball), and allergic bronchopulmonary aspergillosis.

Aspergillus flavus

Aspergillus flavus produces the aflatoxin B₁, which is the most carcinogenic (liver) substance of biological origin. Exposure to *A. flavus* may cause infection of the eye and ear, and rare infections of the lung, heart, and bladder have been reported. The species is one of the main agents of human allergic bronchial aspergillosis and is also one of the common agents of mycotic sinusitis. Systemic infections can occur in leukemia patients. *A. flavus* is distributed worldwide, but is isolated mainly from tropical and subtropical regions. It is found on a variety of substrates from foods to wood exposed to seawater, wood pulp, in birds' nests, on leather and cotton, and on building materials. Other major habitats include, peanuts, maize, cottonseed, and in other oilseeds such as pistachios, copra, and Brazil nuts. The optimal growth temperature ranges from 25-42°C.

***Aureobasidium* species**

Aureobasidium are fungi that thrive in moist environments and are considered common environmental contaminants. Typically, they are not associated with BRI, but can be linked to hypersensitivity pneumonitis in susceptible individuals.

***Botrytis* species**

Botrytis is also an environmental fungal organism with no known adverse health effects. It is commonly isolated as a contaminant in environmental cultures.

***Chaetomium* species**

Chaetomium species are found on a variety of substrates containing cellulose, including paper and plant compost. These fungi are commonly identified as contaminants in clinical cultures and have been occasionally implicated as allergens.

***Cladosporium* species**

The genus *Cladosporium* (also known as *Hormodendrum*) is the most commonly isolated fungus in the world and is composed of 25 different species of mold that thrive in temperate zones throughout the world. Rain drops or moisture liberate spores from decaying leaves, which go on to produce velvety olive green, brown or greenish-grey colonies. *Cladosporium* can readily be detected in homes with poor ventilation and around painted areas of moist window frames. Their spores have been found in some face creams, paints, commercial soil and textiles. *Cladosporium* spores can survive under refrigeration. Patients are commonly assessed for *Cladosporium* sensitivity using extracts from spores and mycelia of *Cladosporium herbarum*. *Cladosporium* species flourish outdoors and are commonly found in indoor office environments and within air handling systems that introduce outside ventilation air to their buildings.

***Geotrichum* species**

Geotrichum species can cause geotrichosis, which is a rare infection that is known to have produced lesions in the lungs, mouth, intestines, vagina, and skin. Fungemia and disseminated infections have also been reported. *Geotrichum* is found as normal flora in humans and seems to cause disease only in compromised hosts.

***Hyalodendrum* species**

Hyalodendron species are fungi similar to *Cladosporium* which are commonly found outdoors on decaying wood and other organic materials. They are non-pathogenic in humans.

***Mucor* species**

Mucor species are fungi that are commonly found as contaminants in environmental cultures. They are occasionally associated with zygomycosis, predominantly in patients who are predisposed to disease by diabetes, immunosuppression, AIDS, severe burns, intravenous drug use, and malnutrition. Mucoraceous species quickly cover agar surfaces with fluff resembling cotton candy. This frequently causes other organisms on a culture plate to become obscured, and therefore, unable to be quantified.

***Penicillium* species**

Penicillium species are widespread in nature being found on fruits, vegetables, and other substrates that may provide nutriment. The *Penicillium* species can cause a condition known as Hypersensitivity Pneumonitis syndrome (a lower lung, allergic-type condition) in susceptible individuals. Hypersensitivity Pneumonitis can occur in certain individuals who become "sensitized" to the organism over a period of time. In most cases, adverse health consequences of exposure to this organism are seen only in "hypersensitive" individuals or those with compromised immune systems. It has also been reported that non-viable cell products and VOCs are believed to be responsible for some adverse health effects. The reference, Medically Important Fungi by D. Larone, Ph.D., states that *Penicillium* species are found in a variety of diseases in which its etiologic significance is uncertain. *Penicillium* has been known to cause keratitis (inflammation of the cornea) and external ear infections. Some strains of *Penicillium* produce toxins.

***Phoma* species**

Phoma species are commonly considered to be environmental fungal contaminants. They are occasional agents of phaeohyphomycosis, but are not typically associated with BRI.

***Rhizopus* species**

Rhizopus species have been found to be etiologic agents of zygomycosis, predominantly in clinical patients who are predisposed to disease by diabetes, immunosuppression, AIDS, severe burns, intravenous drug abuse, malnutrition, etc. They are commonly isolated as environmental contaminants in laboratory cultures and quickly cover agar surfaces with dense growth.

***Rhodotorula* species**

Rhodotorula species is a yeast-like fungus that is commonly isolated as a contaminant in clinical laboratory cultures. It occurs on damp organic materials and is found outdoors in temperate regions. It is not uncommon to find this organism in HVAC systems in buildings using outdoor air in their ventilation systems. It can infect particularly susceptible individuals during the terminal stages of debilitating diseases such as carcinoma and bacterial endocarditis.

***Stachybotrys* species**

Identification of *Stachybotrys chartarum* can occur when organic building materials become wet and stay wet for extended periods of time. The fact that this fungus was identified in the air is cause for concern because the airborne fungus can result in exposures leading to adverse health effects when inhaled by building occupants.

Stachybotrys chartarum most commonly grows on damp cellulose and is found in high concentrations in agricultural products such as hay or straw. In indoor environments, it may be found in areas with severe water leaks, and grows readily on the paper-backing component of gypsum wallboard in wall cavities and in other environments where conditions for growth are suitable. It can also enter buildings from outdoor sources such as occupants and ventilation systems utilizing outside air for ventilation. *Stachybotrys chartarum* has been recently implicated in an outbreak of pulmonary hemorrhage in infants in the Cleveland area in flooded homes. *Stachybotrys chartarum* produces strong mycotoxins (toxic byproduct given off during growth). These mycotoxins have been linked to adverse health effects including contact irritation that can lead to mucous membrane irritation including sore throat and irritation of the conjunctiva around the eye, cough, rhinitis, burning sensations in the mouth, throat, and nasal passages, and cutaneous (skin) irritation at the points of toxin contact. Nosebleeds are also common and tracheal bleeding has been occasionally reported.

Sterilia mycelia

Sterilia mycelia are fungal organisms that do not sporulate and are, therefore, non-reproductive. Sterile hyphae are molds that do not produce conidia (spores) and that are not able to be speciated as a result. They are non-pathogenic to humans and have not been implicated in BRI.

***Ustilago* species**

Ustilago species are fungi that are parasitic on the seeds and flowers of many cereals and grasses and are commonly isolated as contaminants in environmental cultures. They are seldom implicated in human disease, but may be inhaled and subsequently isolated from sputum specimens.

Yeast

Yeasts are the most common fungi isolated in the clinical laboratory. They are ubiquitous in the environment and also live as normal inhabitants in our bodies. Yeasts are considered to be opportunistic pathogens, causing disease in patients with compromised immune systems, with intravascular catheters, with diabetes mellitus, intravenous drug abusers, and those on extended antibiotic treatments. They may be allergenic to susceptible individuals when present in sufficient

date: 11/17/00

to: Curtis

Phone Number: (703) 756-6270

fax number: (703) 756-6289

Pgs (incl cover): (23)

fax

From Trish Gretsky, IH

GSA- Safety & Environmental (WPMOX)

(202) 708-5254

(202) 708-6618 fax

Please find attached, the survey report for Suite 105. Let me start off with.. There was NO *Stachybotrys atra* detected in any of the samples. The bulk sample of the carpet and the wipes collected from under the carpet indicated elevated bacteria levels predominantly gram negative bacteria (indicative of water incursion). Visible water damage and microbial growth was observed on wallboard below windows. Additional damage was observed on wood furniture located within Ms. Janis Hoy's office. See page 6 of the report for recommendations.



11800 Sunrise Valley Drive, Suite 1200
Reston, Virginia 20191

(703) 648-0822
FAX (703) 648-0575

V A0244

May 25, 2000

Ms. Normajean P. Eleazer
Contracting Officer's Representative
General Services Administration
Regional Office Building
7th & D. Street, Room 2080 (WPX)
Washington, D.C. 20407

RE: Skyline V Building – Follow-up Microbial Sampling Survey Report

Dear Ms. Eleazer:

Applied Environmental, Inc. conducted microbial sampling within Rooms 9182 and 9143 of the Skyline V office building located at 5111 Leesburg Pike in Falls Church, Virginia. The follow-up survey was performed on April 7, 2000, and consisted of air sampling to measure airborne fungi following clean-up activities of previously identified *Stachybotrys* and *Aspergillus* species. Viable air sampling was performed on standard fungal media as well as on media preferred by *Stachybotrys*.

SUMMARY

Indoor fungal air sampling results were low, and were well below the outdoor concentration. No *Stachybotrys* or *Aspergillus* species were identified in the samples collected.

Room 9143 is reported to have been cleaned on the evening prior to the survey. The room contained typical finishing materials and office furnishings, and was unoccupied. Most finishing materials in Room 9182 had been removed prior to the sampling. Polyethylene barriers were in place between Room 9182 and the adjacent room. Evidence of water damage was observed below the window, and as corrosion on steel framing studs on the wall bordering the conference room.

SURVEY METHODOLOGY

Viable air sampling was performed in Rooms 9143 and 9182 on the ninth floor of the building. Microbial air samples were collected using an N6 stage Andersen viable sieve impactor. Air was drawn through the impactor using a pre-calibrated GAST electric high-volume sampling pump at a rate of 28.3 liters per minute. Modified malt extract agar was used as a general fungal sampling medium, and Sabaraud Dextrose agar was used to sample specifically for *Stachybotrys*. Analyses of the microbial air samples were performed in accordance with standard medical/public health microbiological isolation and characterization techniques and NIOSH

Method 501 (draft document). The samples were analyzed to identify the concentrations of viable fungal organisms present in total colony forming units per cubic meter of air (cfu/m³). The five most predominant organisms present in each sample were identified to at least the genus level, and to the species level as necessary.

Microbial samples were analyzed by Aerobiology Laboratory Associates, Inc., of Reston, Virginia.

SURVEY FINDINGS

The results of the sampling are provided in the following data table. The laboratory data sheets are included as Attachment A.

Sample Number & Location	Sample Type	Results	Organisms Isolated
SFFM000407-01 Room 9143	Fungi, Air, Count w/ID	63 cfu/m ³	Cladosporium species (44%) Penicillium species (22%) Paecilomyces species (12%) Mucor species (11%) Sterilia mycelia (11%)
SFFM000407-02 Room 9143	Stachybotrys & Fungi, Air, Count w/ID	N/A	Unable to quantitate due to nature of mucoraceous organism. Unable to determine the presence/absence of Stachybotrys due to overgrowth of interfering fungus. Mucor species
SFFM000407-03 Room 9182	Fungi, Air, Count w/ID	42 cfu/m ³	Cladosporium species (50%) Geotrichum species (33%) Yeast (17%)
SFFM000407-04 Room 9182	Stachybotrys & Fungi, Air, Count w/ID	35 cfu/m ³	No Stachybotrys isolated. Cladosporium species (40%) Geotrichum species (40%) Sterilia mycelia (20%)
SFFM000407-05 Outside, front entrance to Skyline V	Fungi, Air, Count w/ID	550 cfu/m ³	Cladosporium species (70%) Penicillium species (8%) Alternaria species (7%) Sterilia mycelia (6%) Paecilomyces species (3%)
SFFM000407-06 Outside, front entrance to Skyline V	Stachybotrys & Fungi, Air, Count w/ID	540 cfu/m ³	Cladosporium species (64%) Sterilia mycelia (21%) Penicillium species (7%) Paecilomyces species (1%) Alternaria species (1%)
SFFM000407-07 Blank	Fungi, Air, Count w/ID	No growth	N/A
SFFM000407-08 Blank	Stachybotrys & Fungi, Air, Count w/ID	No growth	N/A

General interpretation guidelines are provided below.

Microbial - General Guidelines

Microorganisms and other biological contaminants have been associated with various allergic responses including asthma attacks, hypersensitivity responses (hypersensitivity pneumonitis, humidifier fever, allergic rhinitis etc.) and illnesses such as legionellosis, Legionnaire's disease, and Pontiac Fever. Symptoms can include chills, fever, muscle aches, chest tightness, headache, cough, sore throat, diarrhea, and nausea. Sources of microbial contaminants can include air handling system condensate, cooling towers, water-damaged building materials, high indoor humidity, damp organic materials, and porous wet surfaces. The presence of moisture or water in combination with organic materials can support the growth of microorganisms. Microbial contamination within a building ventilation system is also of concern due to the potential for the system to circulate microorganisms to non-source areas (e.g., areas without water damage or reservoirs).

The ACGIH *Bioaerosols, Assessment and Control, 1999*, provides guidance on investigation, sampling, assessment, and remedial actions. This document identifies microorganisms currently associated with Building Related Illness (BRI), but does not provide any criteria for acceptable airborne concentrations or surface contamination levels. Emphasis is placed on identification of species, conditions found at the site, and symptoms reported by the affected individuals. "ACGIH does not support any existing numerical criteria for interpreting data on biological agents from source or air samples in non-manufacturing environments."

There are no federal OSHA standards regulating exposure to microorganisms in the work place. The OSHA *Technical Manual, Chapter 6 - Indoor Air Quality Investigation, issued by OSHA Instruction CPL-2-2.20B, CH-1, November 13, 1990*, provides a value of 1,000 viable cfu/m³, 1,000,000 cfu/gram of fungi in dust or material, and 10,000 cfu/milliliter of stagnant water or slime as contamination indicators.

It should be noted that levels in excess of these concentrations do not necessarily imply that the conditions are unsafe or hazardous. A determination of the types and concentrations of airborne microorganisms is necessary to fully evaluate the hazard to employees. However, as previously indicated, this level does not correlate directly with airborne levels that are of health concern because of the wide variety of microorganisms that can be found in buildings. In several cases where a large number of people have exhibited illnesses that were associated with microbial exposure, the levels of bacteria and fungi have usually been more than 2,000 cfu/m³ of air. It should be noted that during growing seasons, outdoor fungal spore levels can range from 1,000 cfu/m³ to 100,000 cfu/m³ of air.

No contamination indicator is provided for surface or wipe sampling concentrations. Wipe sampling is commonly performed to evaluate the degree of surface contamination. Although the analysis can be reported as a concentration, the result is generally considered an empirical or qualitative value. An affirmative outcome is simply an indicator that maintenance may be required to maintain surface cleanliness. There is no regulatory threshold for microbial wipe samples. Therefore, specific values should take into account sound professional judgment and recommended guidelines of research and public health institutions when evaluating the

Ms. Normajean P. Eleazer
May 25, 2000
Page 4

significance of the analytical results. Careful consideration should also be given when assessing the magnitude of the value, keeping in mind comparative outdoor species, contaminant dispersion, and the toxicity of the microorganism isolated.

Adverse health effects associated with exposure to microbial organisms are a function of many factors, of which concentration and the types of organisms are major considerations. In most cases where the airborne concentration of viable microbes is low, adverse health consequences of exposure to bioaerosols are observed only in hypersensitive individuals, such as persons with known allergy histories, or in individuals with compromised immune systems. When present, the reactions of such individuals tend to become more severe with increasing exposure.

In assessing potential microbial exposures, it is important to note that individual microbial measurements provide a limited view of true exposure due to the fact that levels can fluctuate widely over time and under varying conditions. In addition, dead cells and cell fragments, proteins, metabolites and volatile organic compounds produced by microbes may also be responsible for adverse health effects.

Confirmation of actual health effects resulting from exposure to a microbial agent must be based on medical findings in conjunction with survey test results.

DISCUSSION AND RECOMMENDATIONS

The sampling results indicate that the cleaning procedures and the removal activities were effective in reducing the *Stachybotrys* and *Aspergillus* species concentrations from the rooms sampled. It is important to note that microbial sampling provides a limited characterization of the air within the space at the time of the sampling only. However, low or absent concentrations of the target organisms is an indicator that the areas sampled are not active bioamplification reservoirs.

If you have any questions, or I may be of further assistance, please feel free to call.

Sincerely,



(b) (6)

Francis W. McGrail IV
Division Manager
Indoor Air Quality Services

Ref. No: 1046-00-0198

ATTACHMENT A
LABORATORY DATA SHEETS

Certificate of Laboratory Analysis

Applied Environmental, Inc.
11800 Sunrise Valley Dr., Suite 1200
Reston, VA 20191
Attn:
Project: Skyline V Follow-up
1046-00-0198

Date Received: 4/7/00
Date Reported: 4/14/00
Page 1 of 4
Job ID: 20 0436

Client Sample Number: SFFM000407-01 Lab Sample Number: 20 0436-01
Sampling Location: Room 9143
Date Collected: 4/7/00 Volume/Area: 141.5 L

TEST REQUESTED: 1030 AIR, Total FUNGAL Count w/Identifications

Total FUNGAL Count: 63 cfu/m³

FUNGUS Isolated:

Cladosporium species	44%
Penicillium species	22%
Paecilomyces species	12%
Mucor species	11%
Sterilia mycelia	11%

Detection Limits: 7 cfu/m³

Date Analyzed: 4/12/00

Analyst: Ann Atkinson, B.S., MT (ASCP)

Client Sample Number: SFFM000407-02 Lab Sample Number: 20 0436-02
Sampling Location: Room 9143
Date Collected: 4/7/00 Volume/Area: 141.5 L

TEST REQUESTED: 1038 AIR, Stachybotrys Culture & Total Fungal Count

Results: Unable to quantitate due to nature of mucoraceous organism.
Unable to determine the presence/absence of Stachybotrys due to overgrowth of interfering fungus.

FUNGUS Isolated: Mucor species

Detection Limits: 7 cfu/m³

Date Analyzed: 4/12/00

Analyst: Ann Atkinson, B.S., MT (ASCP)

Certificate of Laboratory Analysis

Applied Environmental, Inc.
11800 Sunrise Valley Dr., Suite 1200
Reston, VA 20191
Attn:
Project: Skyline V Follow-up
1046-00-0198

Date Received: 4/7/00
Date Reported: 4/14/00
Page 2 of 4
Job ID: 20 0436

Client Sample Number:	SFFM000407-03	Lab Sample Number:	20 0436-03
Sampling Location:	Room 9182		
Date Collected:	4/7/00	Volume/Area:	141.5 L

TEST REQUESTED: 1030 AIR, Total FUNGAL Count w/Identifications

Total FUNGAL Count: 42 cfu/m³

FUNGUS Isolated:	Cladosporium species	50%
	Geotrichum species	33%
	Yeast	17%

Detection Limits: 7 cfu/m³

Date Analyzed: 4/12/00

Analyst: Ann Atkinson, B.S., MT (ASCP)

Client Sample Number:	SFFM000407-04	Lab Sample Number:	20 0436-04
Sampling Location:	Room 9182		
Date Collected:	4/7/00	Volume/Area:	141.5 L

TEST REQUESTED: 1038 AIR, Stachybotrys Culture & Total Fungal Count

Results: No Stachybotrys isolated.

Total FUNGAL Count: 35 cfu/m³

FUNGUS Isolated:	Cladosporium species	40%
	Geotrichum species	40%
	Sterilia mycelia	20%

Detection Limits: 7 cfu/m³

Date Analyzed: 4/12/00

Analyst: Ann Atkinson, B.S., MT (ASCP)

Certificate of Laboratory Analysis

Applied Environmental, Inc.
11800 Sunrise Valley Dr., Suite 1200
Reston, VA 20191
Attn:
Project: Skyline V Follow-up
1046-00-0198

Date Received: 4/7/00
Date Reported: 4/14/00
Page 3 of 4
Job ID: 20 0436

Client Sample Number: SFFM000407-05 Lab Sample Number: 20 0436-05
Sampling Location: Outside, Front Entrance to Skyline V
Date Collected: 4/7/00 Volume/Area: 141.5 L

TEST REQUESTED: 1030 AIR, Total FUNGAL Count w/identifications

Total FUNGAL Count: 550 cfu/m³

FUNGUS Isolated:

Cladosporium species	70%
Penicillium species	8%
Alternaria species	7%
Sterilia mycelia	6%
Paecilomyces species	3%

Detection Limits: 7 cfu/m³

Date Analyzed: 4/12/00

Analyst: Ann Atkinson, B.S., MT (ASCP)

Client Sample Number: SFFM000407-06 Lab Sample Number: 20 0436-06
Sampling Location: Outside, Front Entrance to Skyline V
Date Collected: 4/7/00 Volume/Area: 141.5 L

TEST REQUESTED: 1038 AIR, Stachybotrys Culture & Total Fungal Count

Results: No Stachybotrys isolated.

Total FUNGAL Count: 540 cfu/m³

FUNGUS Isolated:

Cladosporium species	64%
Sterilia mycelia	21%
Penicillium species	7%
Paecilomyces species	1%
Alternaria species	1%

Detection Limits: 7 cfu/m³

Date Analyzed: 4/12/00

Analyst: Ann Atkinson, B.S., MT (ASCP)

Certificate of Laboratory Analysis

Applied Environmental, Inc.
11800 Sunrise Valley Dr., Suite 1200
Reston, VA 20191
Attn:
Project: Skyline V Follow-up
1046-00-0198

Date Received: 4/7/00
Date Reported: 4/14/00
Page 4 of 4
Job ID: 20 0436

Client Sample Number:	SFFM000407-07	Lab Sample Number:	20 0436-07
Sampling Location:	Blank		
Date Collected:	4/7/00	Volume/Area:	0 L
<u>TEST REQUESTED:</u>	1030 AIR, Total FUNGAL Count w/Identifications		
Total FUNGAL Count:	No Growth		
<u>Detection Limits:</u>	N / A		
<u>Date Analyzed:</u>	4/12/00		
<u>Analyst:</u>	Ann Atkinson, B.S., MT (ASCP)		

Client Sample Number:	SFFM000407-08	Lab Sample Number:	20 0436-08
Sampling Location:	Blank		
Date Collected:	4/7/00	Volume/Area:	0 L
<u>TEST REQUESTED:</u>	1038 AIR, Stachybotrys Culture & Total Fungal Count		
Total FUNGAL Count:	No Growth		
<u>Detection Limits:</u>	N / A		
<u>Date Analyzed:</u>	4/12/00		
<u>Analyst:</u>	Ann Atkinson, B.S., MT (ASCP)		



VA0244

11800 Sunrise Valley Drive, Suite 1200
Reston, Virginia 20191

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November 16, 2000

Ms. Normajean P. Eleazer
Contracting Officer's Representative
General Services Administration
Regional Office Building
7th & D. Street, Room 2080 (WPX)
Washington, D.C. 20407

RE: Skyline V Building -Microbial Sampling Survey Report, Room 9198

Dear Ms. Eleazer:

Applied Environmental, Inc. conducted microbial sampling within Room 9198 of the Skyline V office building located at 5111 Leesburg Pike, Falls Church, Virginia. The sampling was performed on October 31, 2000, and consisted of air sampling to measure airborne bacteria and fungi. Viable air sampling was performed on standard fungal media as well as on media preferred by *Stachybotrys*.

SUMMARY

Indoor bacterial and fungal air sampling results were low. Bacterial results were consistent with or below the outdoor concentration, and fungal concentrations were well below those measured outdoors. No *Stachybotrys* was identified in the samples collected. The predominant fungal organisms identified indoors were consistent with the outdoor flora.

SURVEY METHODOLOGY

Viable air sampling was performed in Rooms 9194 and 9198 on the ninth floor of the building. Microbial air samples were collected using an N6 stage Andersen viable sieve impactor or equivalent. Air was drawn through the impactor using a precalibrated GAST electric high-volume sampling pump at a rate of 28.3 liters per minute. Trypticase-soy agar (TSA) was used as the bacterial sampling medium, modified malt extract agar was used as a general fungal sampling medium, and Sabaraud Dextrose agar was used to sample specifically for *Stachybotrys*. Analyses of the microbial air samples were performed in accordance with standard medical/public health microbiological isolation and characterization techniques and NIOSH Method 501 (draft document). The samples were analyzed to identify the concentrations of viable fungal organisms present in total colony forming units per cubic meter of air (cfu/m³). The most predominant organisms present in each sample were identified to at least the genus level, and to the species level as necessary.

Microbial samples were analyzed by Aerobiology Laboratory Associates, Inc., of Reston, Virginia.

SURVEY FINDINGS

The results of the sampling are provided in the following data table. The laboratory data sheets are included as Attachment A.

Sample Number & Location	Sample Type	Result	Organisms Isolated
JA001031-01 Room 9198, On Desk	Bacteria, Air, w/IDs	70 cfu/m ³	Coag-negative Staphyococcus species (70%) Bacillus species (20%) Micrococcus species (10%)
	Fungi, Air, w/IDs	250 cfu/m ³	Cladosporium species (68%) Aspergillus species (mult. types) (12%) Penicillium species (9%)
	Stachybotrys, Air	None Isolated	
JA001031-02 Room 9194, On Desk	Bacteria, Air, w/IDs	28 cfu/m ³	Bacillus species (25%) Coag-negative Staphyococcus species (25%) Micrococcus species (25%)
	Fungi, Air, w/IDs	170 cfu/m ³	Cladosporium species (57%) Penicillium species (26%) Acremonium (Cephalosporium) species (13%)
	Stachybotrys, Air	None Isolated	
JA001031-03 Outside, On Roof	Bacteria, Air, w/IDs	70 cfu/m ³	Corynebacterium species (50%) Bacillus species (30%) Coag-negative Staphyococcus species (10%)
	Fungi, Air, w/IDs	1,100 cfu/m ³	Cladosporium species (66%) Penicillium species (32%) Rhizopus species (1%)
	Stachybotrys, Air	None Isolated	
SFFM000407-04 Blank	Bacteria, Air, w/IDs	No Growth	
	Fungi, Air, w/IDs	No Growth	
	Stachybotrys, Air	No Growth	

DISCUSSION AND RECOMMENDATIONS

The sampling results indicate that bioamplification was not occurring in the areas sampled at the time of the survey. The concentrations measured were consistent with or below the outdoor concentrations, and the indoor organisms identified reflected the outdoor flora.

No *Stachybotrys* was identified.

Ms. Normajean P. Eleazer
November 16, 2000
Page 3

If you have any questions, or I may be of further assistance, please feel free to call.

Sincerely,

(b) (6)

Francis W. McGrail IV
Division Manager
Indoor Air Quality Services

Ref. No: 1046-00-0589

Attachments

ATTACHMENT A
LABORATORY DATA SHEETS

Certificate of Laboratory Analysis

Applied Environmental, Inc.
11800 Sunrise Valley Dr., Suite 1200
Reston, VA 20191

Attn:

Project: 1046-00-0589

GSA - Skyline #5, 9Fl.

Date Received: 10/31/00

Date Reported: 11/15/00

Page 1 of 4

Job ID: 20 1659

Client Sample Number:	JA001031-1	Lab Sample Number:	20 1659-01
Sampling Location:	Office #9198 on Desk, 9th Fl.		
Date Collected:	10/31/00	Volume/Area:	141.5 L

TEST REQUESTED: 1038 AIR, Stachybotrys Culture & Total Fungal Count
1005 AIR, Total BACTERIAL Count w/identifications

Total BACTERIAL Count: 70 cfu/m³

BACTERIA Isolated:	Coag-negative Staphylococcus species	70%
	Bacillus species	20%
	Micrococcus species	10%

Date Analyzed: 11/2/00

Results: No Stachybotrys isolated.

Total FUNGAL Count: 250 cfu/m³

FUNGUS Isolated:	Cladosporium species	68%
	Aspergillus species (multiple types)	12%
	Penicillium species	9%

Detection Limits: 7 cfu/m³

Date Analyzed: 11/6/00

Analyst: Ann Atkinson, B.S., MT (ASCP)

Certificate of Laboratory Analysis

Applied Environmental, Inc.
11800 Sunrise Valley Dr., Suite 1200
Reston, VA 20191

Attn:
Project: 1046-00-0589

GSA - Skyline #5, 9Fl.

Date Received: 10/31/00

Date Reported: 11/15/00

Page 2 of 4

Job ID: 20 1659

Client Sample Number: JA001031-2 **Lab Sample Number:** 20 1659-02

Sampling Location: Office #9194 on Desk, 9th Fl.

Date Collected: 10/31/00

Volume/Area: 141.5 L

TEST REQUESTED: 1038 AIR, Stachybotrys Culture & Total Fungal Count
1005 AIR, Total BACTERIAL Count w/Identifications

Total BACTERIAL Count: 28 cfu/m³

BACTERIA Isolated: Bacillus species 25%
Coag-negative Staphylococcus species 25%
Micrococcus species 25%

Date Analyzed: 11/2/00

Results: No Stachybotrys isolated.

Total FUNGAL Count: 170 cfu/m³

FUNGUS Isolated: Cladosporium species 57%
Penicillium species 26%
Acremonium (Cephalosporium) species 13%

Detection Limits: 7 cfu/m³

Date Analyzed: 11/6/00

Analyst: Ann Atkinson, B.S., MT (ASCP)

Certificate of Laboratory Analysis

Applied Environmental, Inc.
11800 Sunrise Valley Dr., Suite 1200
Reston, VA 20191

Attn:

Project: 1046-00-0589

GSA - Skyline #5, 9Fl.

Date Received: 10/31/00

Date Reported: 11/15/00

Page 3 of 4

Job ID: 20 1659

Client Sample Number: JA001031-3 **Lab Sample Number:** 20 1659-03

Sampling Location: Outside on Roof

Date Collected: 10/31/00

Volume/Area: 141.5 L

TEST REQUESTED: 1038 AIR, Stachybotrys Culture & Total Fungal Count
1005 AIR, Total BACTERIAL Count w/identifications

Total BACTERIAL Count: 70 cfu/m³

BACTERIA Isolated:

Corynebacterium species	50%
Bacillus species	30%
Coag-negative Staphylococcus species	10%

Date Analyzed: 11/2/00

Results: No Stachybotrys isolated.

Total FUNGAL Count: 1100 cfu/m³

FUNGUS Isolated:

Cladosporium species	66%
Penicillium species	32%
Rhizopus species	1%

Detection Limits: 7 cfu/m³

Date Analyzed: 11/6/00

Analyst: Ann Atkinson, B.S., MT (ASCP)



Certificate of Laboratory Analysis

Applied Environmental, Inc.
11800 Sunrise Valley Dr., Suite 1200
Reston, VA 20191

Attn:
Project: 1046-00-0589

GSA - Skyline #5, 9Fl.

Date Received: 10/31/00
Date Reported: 11/15/00
Page 4 of 4
Job ID: 20 1659

Client Sample Number:	JA001031-4	Lab Sample Number:	20 1659-04
Sampling Location:	Blank		
Date Collected:	10/31/00	Volume/Area:	0 L
<u>TEST REQUESTED:</u>	1038 AIR, Stachybotrys Culture & Total Fungal Count 1005 AIR, Total BACTERIAL Count w/Identifications		
Total BACTERIAL Count:	No Growth.		
<u>Date Analyzed:</u>	11/2/00		
Total FUNGAL Count:	No Growth.		
<u>Detection Limits:</u>	N / A		
<u>Date Analyzed:</u>	11/6/00		
<u>Analyst:</u>	Ann Atkinson, B.S., MT (ASCP)		

date: 11/29/00

to: Curtis

Phone Number: (703) 756-6270

fax number: (703) 756-6289

Pgs (incl cover): (09)

fax

From Trish Gretskey, IH

GSA- Safety & Environmental (WPMOX)

(202) 708-5254

(202) 708-6618 fax

Please find attached a copy of Applied's report for air sampling on the 9th floor (Rm. 9198) of Skyline V Bldg. The results do not detect *Stachybotrys atra* or elevated levels of other microbial contaminants. Consequently, no recommendations were warranted.

GSA/NCR/WPX

..... (AUTO)

THE FOLLOWING FILE(S) ERASED

FILE	FILE TYPE	OPTION	TEL NO.	PAGE	RESULT
040	MEMORY TX		97037566289	09/09	OK

ERRORS

1) HANG UP OR LINE FAIL 2) BUSY 3) NO ANSWER 4) NO FACSIMILE CONNECTION

TRANSMISSION RESULT REPORT

Please find attached a copy of Applied's report for air sampling on the 9th floor (Rm. 9198) of Skyline V Bldg. The results do not detect Stachybotrys atra or elevated levels of other microbial contaminants. Consequently, no recommendations were warranted.

(202) 708-5254
(202) 708-6618 fax



General Services Administration
National Capital Region
Washington, DC 20407

MAR 17 1993

MEMORANDUM FOR: LARRY POPLIN
BUILDINGS MANAGER,
ARLANDRIA FIELD OFFICE (WPMWA)

THRU: JACK BABCOCK
DIRECTOR,
BUILDINGS MANAGEMENT DIVISION (WPB)

ATTN: SONNY COOK
MANAGER,
WEST DISTRICT (WPEW) *ML 3/19/93*

FROM: ANTHONY PAGONIS (b) (6)
UNIT CHIEF
REAL ESTATE DIVISION (WPEMC-C)

SUBJECT: Lease Contract Administration
Lease No. GS-11B-90206

The following leasing action has been completed with the appropriate document enclosed.

Building:	Skyline	<input type="checkbox"/> New Lease
Address:	5111 Leesburg Pike	<input type="checkbox"/> Succeeding Lease
	Falls Church VA 22041	<input type="checkbox"/> Renewal
Building No.:	VA0244ZZ	<input checked="" type="checkbox"/> Supplemental Lease
Property Manager:	Charles E. Smith	<input type="checkbox"/> Lease Termination
Phone No.:	(703) 769-1213	

Your attention is directed to the following important features of this action, including any special requirements to be performed by the Lessor:

Services: Fully Serviced Lease.

Special Requirements: Radon Certification within sixty (60) days of execution of this agreement (March 10, 1993).

Utility Payments Assumed by the Government: All terms and conditions of the lease shall remain in force and effect.

Your assistance is requested to ensure that the lessor performs in accordance with contractual requirements, which would include observance of delivery dates where specified, should you require any additional information or assistance, please contact Mr. Robert Reed, of my staff, on 202 708-7149.

Enclosure



GENERAL SERVICES ADMINISTRATION
PUBLIC BUILDINGS SERVICE

SUPPLEMENTAL AGREEMENT

DATE

7 (Page 1 of 2)

MAR 10 1993

SUPPLEMENTAL LEASE AGREEMENT

TO LEASE NO.

GS-11B-90206 NEG

ADDRESS OF PREMISES Skyline Five Building
5111 Leesburg Pike
Falls Church, Virginia 22041

THIS AGREEMENT, made and entered into this date by and between Thirteenth Skyline Associates Limited Partnership

c/o The Charles E. Smith Management, Inc.
2345 Crystal Drive
Arlington, Virginia 22202

hereinafter called the Lessor, and the UNITED STATES OF AMERICA, hereinafter called the Government:

WHEREAS, the parties hereto desire to amend the above Lease; to provide for the acquisition of additional space (Unit II).

NOW THEREFORE, these parties for the considerations hereinafter mentioned covenant and agree that the said Lease is amended, effective upon execution by the Government, as follows:

Paragraphs 1 and 3 of the basic lease are hereby deleted and the following paragraphs 1 and 3 are substituted in lieu thereof; Paragraphs 9, 10, 11, 12, 13, and Exhibit "A", is hereby added to the lease:

1. The Lessor hereby leases to the Government the following described premises:

28,672 net usable square feet of office and related space, located on part of the fourth (4th) floor at 5111 Leesburg Pike, Falls Church, Virginia 22041 in units as follows:

Unit I - 27,835 net usable square feet of office and related space, as identified on the "Floor Plan" attached to the basic lease;

Unit II - 847 net usable square feet of office and related space, as identified on the floor plan, Exhibit A, attached hereto and made a part hereof.

"CONTINUED ON ATTACHED SHEETS"

All other terms and conditions of the lease shall remain in force and effect.

IN WITNESS WHEREOF, the parties subscribed their names as of the above date.

LESSOR: Thirteenth Skyline Associates Limited Partnership c/o Charles E. Smith Management, Inc.

BY (b) (6) Senior Vice President: Counsel
(Signature) (Title)

IN THE PRESENCE OF (witnessed by:)

(b) (6) 2345 Crystal Drive, Arlington, VA
(Signature) (Address)

UNITED STATES OF AMERICA

BY (b) (6)
Anthony J. Pagonis
(Signature)

Contracting Officer
GSA, NCR, OPR, RED
(Official Title)

to be used for office and related uses.

3. The Government shall pay the Lessor annual rent as follows:

Unit I - \$677,140.44, and Unit II - \$16,516.50, for a total annual rental of \$693,656.94 at the rate of \$57,804.75 per month in arrears. The Government also agrees to make a one time lump sum payment of \$23,398.38 for the period of October 1, 1991 through February 28, 1993 -- a total of seventeen (17) months; it has been agreed between the Lessor and the Government that this lump sum payment represents a "Full and Final Settlement". As a condition of this lump sum payment, the Lessor agrees to waive any rights to back interest that may be due, or any future claim concerning the acquisition of this additional space (Unit II). Rent for a lesser period shall be prorated. Rent checks shall be made payable to:

Thirteenth Skyline Associates
Limited Partnership
c/o Charles E. Smith Companies
2345 Crystal Drive,
Arlington, Virginia 22202

9. For the purpose of real estate tax adjustments as set forth in paragraph number 18 of the SFO attachment to the basic lease, the Government is deemed to occupy 11.21% of the building.

10. For the purpose of operating cost escalations, the base operating costs are hereby increased from \$128,056.00 to \$131,953.00.

The effective dates for all operating cost escalations for this lease have been aligned to the anniversary date of the lease. All future escalations will be calculated on the total base operating cost of the lease which is \$131,953.00. Escalations (deescalations) will be calculated on previous year to current year percentage increases (or decreases based upon statistics published by the U. S. Department of Labor (DoL), Consumer Price Index. The current published reference base is 1982-84=100.

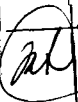
11. The lease term for Unit II is effective from October 1, 1991; said term shall run concurrently with the existing lease term -- through September 30, 1999.

12. The following clauses and certifications are attached hereto and made a part hereof:

- (a) GSA Form 3517 - General Clauses (23 pages); and
- (b) GSA Form 3518 - Representations and Certifications (7 pages).

13. The lessor agrees to perform a Radon test as required by the Radon Certification within sixty (60) days of the execution of this agreement. Results of this test will be furnished to GSA. If the air samples reveal radon levels over 4 picocuries per liter (pci/l), the lessor shall remedy the condition within thirty (30) days or the Government will have the right to terminate the lease.

INITIALS

Lessor	Govt.
	

(b) (5), (b) (7)(F)

INITIALS	
Lessor	Govt.
<i>[Signature]</i>	<i>[Signature]</i>

847 ☒ EXHIBIT "A" TO SLA #7 (GS-11B-90206 NEG)

GENERAL CLAUSES
(Acquisition of Leasehold Interests in Real Property)

1. 552.270-10 - DEFINITIONS (AUG 1992)

The following terms and phrases (except as otherwise expressly provided or unless the context otherwise requires) for all purposes of this lease shall have the respective meanings hereinafter specified:

- (a) "Commencement Date" means the first day of the term.
- (b) "Contract" and "Contractor" means "Lease" and "Lessor," respectively.
- (c) "Contracting Officer" means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.
- (d) "Delivery Date" means the date specified in or determined pursuant to the provisions of this lease for delivery of the premises to the Government, improved in accordance with the provisions of this lease and substantially complete, as such date may be modified in accordance with the provisions of this lease.
- (e) "Delivery Time" means the number of days provided by this lease for delivery of the premises to the Government, as such number may be modified in accordance with the provisions of this lease.
- (f) "Excusable Delays" mean delays arising without the fault or negligence of Lessor and Lessor's subcontractors and suppliers at any tier, and shall include, without limitation, (1) acts of God or of the public enemy, (2) acts of the United States of America in either its sovereign or contractual capacity, (3) acts of another contractor in the performance of a contract with the Government, (4) fires, (5) floods, (6) epidemics, (7) quarantine restrictions, (8) strikes, (9) freight embargoes, (10) unusually severe weather, or (11) delays of subcontractors or suppliers at any tier arising from unforeseeable causes beyond the control and without the fault or negligence of both the Lessor and any such subcontractor or supplier.
- (g) "Lessor" means the sub-lessor if this lease is a sublease.
- (h) "Lessor shall provide" means the Lessor shall furnish and install at Lessor's expense.
- (i) "Notice" means written notice sent by certified or registered mail, Express Mail or comparable service, or delivered by hand. Notice shall be effective on the date delivery is accepted or refused.
- (j) "Premises" means the space described on the Standard Form 2, U.S. Government Lease for Real Property, of this lease.
- (k) "Substantially complete" and "substantial completion" means that the work, the common and other areas of the building, and all other things necessary for the Government's access to the premises and occupancy, possession, use and enjoyment thereof, as provided in this lease, have been completed or obtained, excepting only such minor matters as do not interfere with or materially diminish such access, occupancy, possession, use or enjoyment.
- (l) "Work" means all alterations, improvements, modifications, and other things required for the preparation or continued occupancy of the premises by the Government as specified in this lease.

2. 552.270-11 - SUBLETTING AND ASSIGNMENT (AUG 1992)

The Government may sublet any part of the premises but shall not be relieved from any obligations under this lease by reason of any such subletting. The Government may at any time assign this lease, and be relieved from all obligations to Lessor under this lease excepting only unpaid rent and other liabilities, if any, that have accrued to the date of said assignment. Any assignment shall be subject to prior written consent of Lessor, which shall not be unreasonably withheld.

3. 552.270-18 - SUCCESSORS BOUND (AUG 1992)

This lease shall bind, and inure to the benefit of, the parties and their respective heirs, executors, administrators, successors, and assigns.

INITIALS 
Lessor Government

4. 552.270-34 - SUBORDINATION, NONDISTURBANCE AND ATTORNMEN (AUG 1992)

(a) Lessor warrants that it holds such title to or other interest in the premises and other property as is necessary to the Government's access to the premises and full use and enjoyment thereof in accordance with the provisions of this lease. Government agrees, in consideration of the warranties and conditions set forth in this clause, that this lease is subject and subordinate to any and all recorded mortgages, deeds of trust and other liens now or hereafter existing or imposed upon the premises, and to any renewal, modification or extension thereof. It is the intention of the parties that this provision shall be self-operative and that no further instrument shall be required to effect the present or subsequent subordination of this lease. Government agrees, however, within twenty (20) business days next following the Contracting Officer's receipt of a written demand, to execute such instruments as Lessor may reasonably request to evidence further the subordination of this lease to any existing or future mortgage, deed of trust or other security interest pertaining to the premises, and to any water, sewer or access easement necessary or desirable to serve the premises or adjoining property owned in whole or in part by Lessor if such easement does not interfere with the full enjoyment of any right granted the Government under this lease.

(b) No such subordination, to either existing or future mortgages, deeds of trust or other lien or security instrument shall operate to affect adversely any right of the Government under this lease so long as the Government is not in default under this lease. Lessor will include in any future mortgage, deed of trust or other security instrument to which this lease becomes subordinate, or in a separate nondisturbance agreement, a provision to the foregoing effect. Lessor warrants that the holders of all notes or other obligations secured by existing mortgages, deeds of trust or other security instruments have consented to the provisions of this clause, and agrees to provide true copies of all such consents to the Contracting Officer promptly upon demand.

(c) In the event of any sale of the premises or any portion thereof by foreclosure of the lien of any such mortgage, deed of trust or other security instrument, or the giving of a deed in lieu of foreclosure, the Government will be deemed to have attorned to any purchaser, purchasers, transferee or transferees of the premises or any portion thereof and its or their successors and assigns, and any such purchasers and transferees will be deemed to have assumed all obligations of the Lessor under this lease, so as to establish direct privity of estate and contract between Government and such purchasers or transferees, with the same force, effect and relative priority in time and right as if the lease had initially been entered into between such purchasers or transferees and the Government; provided, further, that the Contracting Officer and such purchasers or transferees shall, with reasonable promptness following any such sale or deed delivery in lieu of foreclosure, execute all such revisions to this lease, or other writings, as shall be necessary to document the foregoing relationship.

(d) None of the foregoing provisions may be deemed or construed to imply a waiver of the Government's rights as a sovereign.

5. 552.270-35 - STATEMENT OF LEASE (AUG 1992)

(a) The Contracting Officer will, within thirty (30) days next following the Contracting Officer's receipt of a joint written request from Lessor and a prospective lender or purchaser of the building, execute and deliver to Lessor a letter stating that the same is issued subject to the conditions stated in this clause and, if such is the case, that (1) the lease is in full force and effect; (2) the date to which the rent and other charges have been paid in advance, if any; and (3) whether any notice of default has been issued.


(b) Letters issued pursuant to this clause are subject to the following conditions:

(1) That they are based solely upon a reasonably diligent review of the Contracting Officer's lease file as of the date of issuance;

(2) That the Government shall not be held liable because of any defect in or condition of the premises or building;

(3) That the Contracting Officer does not warrant or represent that the premises or building comply with applicable Federal, State and local law; and

(4) That the Lessor, and each prospective lender and purchaser are deemed to have constructive notice of such facts as would be ascertainable by reasonable prepurchase and precommitment inspection of the Premises and Building and by inquiry to appropriate Federal, State and local Government officials.

INITIALS: 
Lessor Government

6. 552.270-36 - SUBSTITUTION OF TENANT AGENCY (AUG 1992)

The Government may, at any time and from time to time, substitute any Government agency or agencies for the Government agency or agencies, if any, named in the lease.

7. 552.270-37 - NO WAIVER (AUG 1992)

No failure by either party to insist upon the strict performance of any provision of this lease or to exercise any right or remedy consequent upon a breach thereof, and no acceptance of full or partial rent or other performance by either party during the continuance of any such breach shall constitute a waiver of any such breach of such provision.

8. 552.270-38 - INTEGRATED AGREEMENT (AUG 1992)

This Lease, upon execution, contains the entire agreement of the parties and no prior written or oral agreement, express or implied, shall be admissible to contradict the provisions of the Lease.

9. 552.270-39 - MUTUALITY OF OBLIGATION (AUG 1992)

The obligations and covenants of the Lessor, and the Government's obligation to pay rent and other Government obligations and covenants, arising under or related to this Lease, are interdependent. The Government may, upon issuance of and delivery to Lessor of a final decision asserting a claim against Lessor, set off such claim, in whole or in part, as against any payment or payments then or thereafter due the Lessor under this lease. No setoff pursuant to this clause shall constitute a breach by the Government of this lease.

10. 552.270-27 - DELIVERY AND CONDITION (AUG 1992)

(a) Unless the Government elects to have the space occupied in increments, the space must be delivered ready for occupancy as a complete unit. The Government reserves the right to determine when the space is substantially complete.

(b) If the premises do not in every respect comply with the provisions of this lease the Contracting Officer may, in accordance with the Failure in Performance clause of this lease, elect to reduce the rent payments.

11. 552.270-28 - DEFAULT IN DELIVERY - TIME EXTENSIONS (AUG 1992)

(a) With respect to Lessor's obligation to deliver the premises substantially complete by the delivery date (as such date may be modified pursuant to this lease), time is of the essence. If the Lessor fails to prosecute the work with the diligence that will insure its substantial completion by the delivery date or fails to substantially complete the work by such date, the Government may by notice to the Lessor terminate this lease, which termination shall be effective when received by Lessor. The Lessor and the Lessor's sureties, if any, shall be jointly and severally liable for any damages to the Government resulting from such termination, as provided in this clause. The Government shall be entitled to the following damages:

(1) The Government's aggregate rent and estimated real estate tax and operating cost adjustments for the firm term and all option terms of its replacement lease or leases, in excess of the aggregate rent and estimated real estate tax and operating cost adjustments for the term; provided, if the Government procures replacement premises for a term (including all option terms) in excess of the term, the Lessor shall not be liable for excess Government rent or adjustments during such excess part of such term;

(2) All administrative and other costs borne by the Government in procuring a replacement lease or leases;

(3) Such other, additional relief as may be provided for in this lease, at law or in equity.

(4) Damages to which the Government may be entitled under this clause shall be due and payable thirty (30) days next following the date Lessor receives notice from the Contracting Officer specifying such damages.

(b) Delivery by Lessor of less than the minimum square footage required by this lease shall in no event be construed as substantial completion, except as permitted by the Contracting Officer.

(c) Notwithstanding paragraph (a) of this clause, this lease shall not be terminated under this clause nor the Lessor charged with damages under this clause, if (1) the delay in substantially completing the work arises from excusable delays and (2) the Lessor within 10 days from the beginning of any such delay

INITIALS:

 
Lessor Government

(unless extended in writing by the Contracting Officer) provides notice to the Contracting Officer of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of delay. If the facts warrant such action, the delivery date shall be extended, by the Contracting Officer, to the extent of such delay at no additional costs to the Government. A time extension is the sole remedy of the Lessor.

12. 552.270-30 - PROGRESSIVE OCCUPANCY (AUG 1992)

The Government shall have the right to elect to occupy the space in partial increments prior to the substantial completion of the entire leased premises, and the Lessor agrees to schedule its work so as to deliver the space incrementally as elected by the Government. The Government shall pay rent commencing with the first business day following substantial completion of the entire leased premise unless the Government has elected to occupy the leased premises incrementally. In case of incremental occupancy, the Government shall pay rent pro rata upon the first business day following substantial completion of each incremental unit. Rental payments shall become due on the first workday of the month following the month in which an increment of space is substantially complete, except that should an increment of space be substantially completed after the fifteenth day of the month, the payment due date will be the first workday of the second month following the month in which it was substantially complete. The commencement date of the firm lease term will be a composite determined from all rent commencement dates.

13. 552.270-32 - EFFECT OF ACCEPTANCE AND OCCUPANCY (AUG 1992)

Neither the Government's acceptance of the premises for occupancy, nor the Government's occupancy thereof, shall be construed as a waiver of any requirement of or right of the Government under this Lease, or as otherwise prejudicing the Government with respect to any such requirement or right.

14. 552.270-12 - MAINTENANCE OF BUILDING AND PREMISES - RIGHT OF ENTRY (AUG 1992)

Except in case of damage arising out of the willful act or negligence of a Government employee, Lessor shall maintain the premises, including the building and all equipment, fixtures, and appurtenances furnished by the lessor under this lease, in good repair and condition so that they are suitable in appearance and capable of supplying such heat, air conditioning, light, ventilation, access and other things to the premises, without reasonably preventable or recurring disruption, as is required for the Government's access to, occupancy, possession, use and enjoyment of the premises as provided in this lease. For the purpose of so maintaining the premises, the Lessor may at reasonable times enter the premises with the approval of the authorized Government representative in charge.

15. 552.270-17 - FAILURE IN PERFORMANCE (AUG 1992)

The covenant to pay rent and the covenant to provide any service, utility, maintenance, or repair required under this lease are interdependent. In the event of any failure by the Lessor to provide any service, utility, maintenance, repair or replacement required under this lease the Government may, by contract or otherwise, perform the requirement and deduct from any payment or payments under this lease, then or thereafter due, the resulting cost to the Government, including all administrative costs. If the Government elects to perform any such requirement, the Government and each of its contractors shall be entitled to access to any and all areas of the building, access to which is necessary to perform any such requirement, and the Lessor shall afford and facilitate such access. Alternatively, the Government may deduct from any payments under this lease, then or thereafter due, an amount which reflects the reduced value of the contract requirement not performed. No deduction from rent pursuant to this clause shall constitute a default by the Government under this lease. These remedies are not exclusive and are in addition to any other remedies which may be available under this lease or at law.

16. 552.270-33 - DEFAULT BY LESSOR DURING THE TERM (AUG 1992)

(a) Each of the following shall constitute a default by Lessor under this lease:

(1) Failure to maintain, repair, operate or service the premises as and when specified in this lease, or failure to perform any other requirement of this lease as and when required provided any such failure shall remain uncured for a period of thirty (30) days next following Lessor's receipt of notice thereof from the Contracting Officer or an authorized representative.

(2) Repeated and unexcused failure by Lessor to comply with one or more requirements of this lease shall constitute a default notwithstanding that one or all such failures shall have been timely cured pursuant to this clause.

INITIALS:  
Lessor Government

(b) If a default occurs, the Government may, by notice to Lessor, terminate this lease for default and if so terminated, the Government shall be entitled to the damages specified in the Default in Delivery-Time Extensions clause.

17. 552.270-13 - FIRE AND CASUALTY DAMAGE (AUG 1992)

If the entire premises are destroyed by fire or other casualty, this lease will immediately terminate. In case of partial destruction or damage, so as to render the premises untenable, as determined by the Government, the Government may terminate the lease by giving written notice to the Lessor within 15 calendar days of the fire or other casualty; if so terminated, no rent will accrue to the Lessor after such partial destruction or damage; and if not so terminated, the rent will be reduced proportionately by supplemental agreement hereto effective from the date of such partial destruction or damage. Nothing in this lease shall be construed as relieving Lessor from liability for damage to or destruction of property of the United States of America caused by the willful or negligent act or omission of Lessor.

18. 552.270-15 - COMPLIANCE WITH APPLICABLE LAW (AUG 1992)

Lessor shall comply with all Federal, state and local laws applicable to the Lessor as owner or lessor, or both, of the building or premises, including, without limitation, laws applicable to the construction, ownership, alteration or operation of both or either thereof, and will obtain all necessary permits, licenses and similar items at Lessor's expense. The Government will comply with all Federal state and local laws applicable to and enforceable against it as a tenant under this lease; provided that nothing in this lease shall be construed as a waiver of any sovereign immunity of the Government. This lease shall be governed by Federal law.

19. 552.270-19 - ALTERATIONS (JUNE 1985)

The Government shall have the right during the existence of this lease to make alterations, attach fixtures, and erect structures or signs in or upon the premises hereby leased, which fixtures, additions or structures so placed in, on, upon, or attached to the said premises shall be and remain the property of the Government and may be removed or otherwise disposed of by the Government. If the lease contemplates that the Government is the sole occupant of the building, for purposes of this clause, the leased premises include the land on which the building is sited and the building itself. Otherwise, the Government shall have the right to tie into or make any physical connection with any structure located on the property as is reasonably necessary for appropriate utilization of the leased space.



20. 552.270-16 - INSPECTION - RIGHT OF ENTRY (AUG 1992)

(a) At any time and from time to time after receipt of an offer (until the same has been duly withdrawn or rejected), after acceptance thereof and during the term, the agents, employees and contractors of the Government may, upon reasonable prior notice to Offeror or Lessor, enter upon the offered premises or the premises, and all other areas of the building access to which is necessary to accomplish the purposes of entry, to determine the potential or actual compliance by the Offeror or Lessor with the requirements of the solicitation or this lease, which purposes shall include, but not be limited to: (1) inspecting, sampling and analyzing of suspected asbestos-containing materials and air monitoring for asbestos fibers; (2) inspecting the heating, ventilation and air conditioning system, maintenance records, and mechanical rooms for the offered premises or the premises; (3) inspecting for any leaks, spills, or other potentially hazardous conditions which may involve tenant exposure to hazardous or toxic substances; and (4) inspecting for any current or past hazardous waste operations, to ensure that appropriate mitigative actions were taken to alleviate any environmentally unsound activities in accordance with Federal, State and local law.

(b) Nothing in this clause shall be construed to create a Government duty to inspect for toxic materials or to impose a higher standard of care on the Government than on other lessees. The purpose of this clause is to promote the ease with which the Government may inspect the building. Nothing in this clause shall act to relieve the Lessor of any duty to inspect or liability which might arise as a result of Lessor's failure to inspect for or correct a hazardous condition.

21. 552.270-31 - MEASUREMENT FOR PAYMENT (AUG 1992)

When space is offered and accepted, the space will be mutually measured upon substantial completion. Payment will be made on the basis of actual measurement; however, payment will not be made for substantially completed space which is in excess of the maximum square footage solicited. The annual rent will be calculated by multiplying the annual square foot rate times square footage.

INITIALS:  
Lessor Government

22. 552.232-71 - PROMPT PAYMENT (APR 1989)

The Government will make payments under the terms and conditions specified in this clause. Payment shall be considered as being made on the day a check is dated or an electronic funds transfer is made. All days referred to in this clause are calendar days, unless otherwise specified.

(a) Payment due date.

(1) Rental payments. Rent shall be paid monthly in arrears and will be due on the first workday of each month, and only as provided for by the lease.

(i) When the date for commencement of rent falls on the 15th day of the month or earlier, the initial monthly rental payment under this contract shall become due on the first workday of the month following the month in which the commencement of the rent is effective.

(ii) When the date for commencement of rent falls after the 15th day of the month, the initial monthly rental payment under this contract shall become due on the first workday of the second month following the month in which the commencement of the rent is effective.

(2) Other payments. The due date for making payments other than rent shall be the later of the following two events:

(i) The 30th day after the designated billing office has received a proper invoice from the Contractor.

(ii) The 30th day after Government acceptance of the work or service. However, if the designated billing office fails to annotate the invoice with the actual date of receipt, the invoice payment due date shall be deemed to be the 30th day after the Contractor's invoice is dated, provided a proper invoice is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(b) Invoice and inspection requirements for payments other than rent.

(1) The Contractor shall prepare and submit an invoice to the designated billing office after completion of the work. A proper invoice shall include the following items:

(i) Name and address of the Contractor.

(ii) Invoice date.

(iii) Lease number.

(iv) Government's order number or other authorization.

(v) Description, price, and quantity of work or services delivered.

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the remittance address in the lease or the order.)

(vii) Name (where practicable), title, phone number, and mailing address of person to be notified in the event of a defective invoice.

(2) The Government will inspect and determine the acceptability of the work performed or services delivered within 7 days after the receipt of a proper invoice or notification of completion of the work or services unless a different period is specified at the time the order is placed. If actual acceptance occurs later, for the purpose of determining the payment due date and calculation of interest, acceptance will be deemed to occur on the last day of the 7-day inspection period. If the work or service is rejected for failure to conform to the technical requirements of the contract, the 7 days will be counted beginning with receipt of a new invoice or notification. In either case, the Contractor is not entitled to any payment or interest unless actual acceptance by the Government occurs.

(c) Interest Penalty.

(1) An interest penalty shall be paid automatically by the Government, without request from the Contractor, if payment is not made by the due date.

(2) The interest penalty shall be at the rate established by the Secretary of the Treasury under Section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) that is in effect on the day after the due date. This rate is referred to as the "Renegotiation Board Interest Rate," and it is published in the Federal Register semiannually on or about January 1 and July 1. The interest penalty shall accrue daily on the payment amount approved by the Government and be compounded in 30-day increments inclusive from the first day after the due date through the payment date.

(3) Interest penalties will not continue to accrue after the filing of a claim for such penalties under the clause at 52.233-1, Disputes, or for more than 1 year. Interest penalties of less than \$1.00 need not be paid.

(4) Interest penalties are not required on payment delays due to disagreement between the Government and Contractor over the payment amount or other issues involving contract compliance or on amounts temporarily withheld or retained in accordance with the terms of the contract. Claims involving disputes, and any interest that may be payable, will be resolved in accordance with the clause at 52.233-1, Disputes.

INITIALS:


Lessor


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23. 552.232-73 - ELECTRONIC FUNDS TRANSFER PAYMENT (AUG 1992)

(a) Payments under this lease will be made by the Government either by check or electronic funds transfer (EFT). If the Lessor elects to receive payment by EFT, after award, but no later than 30 days before the first payment, the Lessor shall designate a financial institution for receipt of EFT payments, and shall submit this designation to the Contracting Officer or other Government official, as directed.

(b) For payment by EFT, the Lessor shall provide the following information:

(1) The American Bankers Association 9-digit identifying number for wire transfers of the financing institution receiving payment if the institution has access to the Federal Reserve Communications System.

(2) Number of account to which funds are to be deposited.

(3) Type of depositor account ('C' for checking, 'S' for savings).

(4) If the Lessor is a new enrollee to the EFT system, a 'Payment Information Form,' SF 3881, must be completed before payment can be processed.

(c) In the event the Lessor, during the performance of this contract, elects to designate a different financial institution for the receipt of any payment made using EFT procedures, notification of such change and the required information specified above must be received by the appropriate Government official no later than 30 days prior to the date such change is to become effective.

(d) The documents furnishing the information required in this clause must be dated and contain the signature, title, and telephone number of the Lessor or an authorized representative designated by the Lessor, as well as the Lessor's name and lease number.

(e) Lessor failure to properly designate a financial institution or to provide appropriate payee bank account information may delay payments of amounts otherwise properly due.

24. 552.232-72 - INVOICE REQUIREMENTS (VARIATION) (APR 1989)

(This clause applies to payments other than rent.)

(a) Invoices shall be submitted in an original only, unless otherwise specified, to the designated billing office specified in this contract or purchase/delivery order.

(b) Invoices must include the Accounting Control Transaction (ACT) number provided below or on the purchase/delivery order.

ACT Number (to be supplied on individual orders)


(c) If information or documentation in addition to that required by the Prompt Payment clause of this contract is required in connection with an invoice for a particular order, the order will indicate what information or documentation must be submitted.

25. 52.232-23 - ASSIGNMENT OF CLAIMS (JAN 1986)

(a) The Contractor, under the Assignment of Claims Act, as amended, 31 USC 3727, 41 USC 15 (hereafter referred to as the "the Act"), may assign its rights to be paid amounts due or to become due as a result of the performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency. The assignee under such an assignment may thereafter further assign or reassign its right under the original assignment to any type of financing institution described in the preceding sentence.

(b) Any assignment or reassignment authorized under the Act and this clause shall cover all unpaid amounts payable under this contract, and shall not be made to more than one party, except that an assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in the financing of this contract.

(c) The Contractor shall not furnish or disclose to any assignee under this contract any classified document (including this contract) or information related to work under this contract until the Contracting Officer authorizes such action in writing.

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26. 52.203-1 - OFFICIALS NOT TO BENEFIT (APR 1984)

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this contract, or to any benefit arising from it. However, this clause does not apply to this contract to the extent that this contract is made with a corporation for the corporation's general benefit.

27. 552.203-5 - COVENANT AGAINST CONTINGENT FEES (FEB 1990)

(a) The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration, or otherwise recover the full amount of the contingent fee.

(b) "Bona fide agency," as used in this clause, means an established commercial or selling agency (including licensed real estate agents or brokers), maintained by a Contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.

"Bona fide employee," as used in this clause, means a person, employed by a Contractor and subject to the Contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.

"Contingent fee," as used in this clause, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.

"Improper influence," as used in this clause, means any influence that induces or tends to induce a Government employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

28. 52.203-7 - ANTI-KICKBACK PROCEDURES (OCT 1988)

(a) Definitions.

"Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to any prime Contractor, prime Contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract.

"Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.



"Prime contract," as used in this clause, means a contract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind.

"Prime Contractor," as used in this clause, means a person who has entered into a prime contract with the United States.

"Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.

"Subcontract," as used in this clause, means a contract or contractual action entered into by a prime Contractor or subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.

"Subcontractor," as used in this clause, (1) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

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"Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

(b) The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person from—

- (1) Providing or attempting to provide or offering to provide any kickback;
- (2) Soliciting, accepting, or attempting to accept any kickback; or
- (3) Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.

(c)(1) The Contractor shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in paragraph (b) of this clause in its own operations and direct business relationships.

(2) When the Contractor has reasonable grounds to believe that a violation described in paragraph (b) of this clause may have occurred, the Contractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Department of Justice.

(3) The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this clause.

(4) The Contracting Officer may (i) offset the amount of the kickback against any monies owed by the United States under the prime contract and/or (ii) direct that the Prime Contractor withhold from sums owed a subcontractor under the prime contract, the amount of the kickback. The Contracting Officer may order that monies withheld under subdivision (c)(4)(ii) of this clause be paid over to the Government unless the Government has already offset those monies under subdivision (c)(4)(i) of this clause. In the either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld.

(5) The Contractor agrees to incorporate the substance of this clause, including subparagraph (c)(5) but excepting subparagraph (c)(1), in all subcontracts under this contract.

29. 52.203-9 – REQUIREMENT FOR CERTIFICATE OF PROCUREMENT INTEGRITY – MODIFICATION (NOV 1990)

(a) Definitions. The definitions set forth in FAR 3.104-4 are hereby incorporated in this clause.

(b) The contractor agrees that it will execute the certification set forth in paragraph (c) of this clause, when requested by the Contracting Officer in connection with the execution of any modification of this contract.

(c) Certification. As required in paragraph (b) of this clause, the officer or employee responsible for the modification proposal shall execute the following certification:

CERTIFICATE OF PROCUREMENT INTEGRITY – MODIFICATION (NOV 1990)

(1) I, [Name of certifier], am the officer or employee responsible for the preparation of this modification proposal and hereby certify that, to the best of my knowledge and belief, with the exception of any information described in this certification, I have no information concerning a violation or possible violation of subsections 27(a), (b), (d), or (f) of the Office of Federal Procurement Policy Act, as amended* (41 U.S.C. 423) (hereinafter referred to as "the Act"), as implemented in the FAR, occurring during the conduct of this procurement (contract and modification number).

(2) As required by subsection 27(e)(1)(B) of the Act, I further certify that, to the best of my knowledge and belief each officer, employee, agent, representative, and consultant of [Name of Offeror] who has participated personally and substantially in the preparation or submission of this proposal has certified that he or she is familiar with, and will comply with, the requirements of subsection 27(a) of the Act, as implemented in the FAR, and will report immediately to me any information concerning a violation or possible violation of subsections 27(a), (b), (d), or (f) of the Act, as implemented in the FAR, pertaining to this procurement.

(3) Violations or possible violations: (Continue on plain bond paper if necessary and label Certificate of Procurement Integrity-Modification (Continuation Sheet), ENTER "NONE" IF NONE EXISTS)

INITIALS:


Lessor Government

(SAMPLE - DO NOT COMPLETE OR SIGN THIS CERTIFICATE. THE CONTRACTING OFFICER WILL SPECIFICALLY REQUEST IT WHEN NEEDED.)

[signature of the officer or employee responsible for the modification proposal and date]

[typed name of the officer or employee responsible for the modification proposal]

*Subsections 27(a), (b), and (d) are effective on December 1, 1990. Subsection 27(f) is effective on June 1, 1991.

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER TITLE 18, UNITED STATES CODE, SECTION 1001.

(End of certification)

(d) In making the certification in paragraph (2) of the certificate, the officer or employee of the competing Contractor responsible for the offer or bid, may rely upon a one-time certification from each individual required to submit a certification to the competing Contractor, supplemented by periodic training. These certifications shall be obtained at the earliest possible date after an individual required to certify begins employment or association with the Contractor. If a Contractor decides to rely on a certification executed prior to the suspension of section 27 (i.e., prior to December 1, 1989), the Contractor shall ensure that an individual who has so certified is notified that section 27 has been reinstated. These certifications shall be maintained by the Contractor for a period of 6 years from the date a certifying employee's employment with the company ends or, for an agency, representative, or consultant, 6 years from the date such individual ceases to act on behalf of the contractor.

(e) The certification required by paragraph (c) of this clause is a material representation of fact upon which reliance will be placed in executing this modification.

30. 552.203-73 - PRICE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (SEP 1990)

(a) If the head of the contracting activity (HCA) or his or her designee determines that there was a violation of subsection 27(a) of the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 423), as implemented in the Federal Acquisition Regulation, the Government, at its election, may —


(1) Reduce the monthly rental under this lease by 5 percent of the amount of the rental for each month of the remaining term of the lease, including any option periods, and recover 5 percent of the rental already paid;

(2) Reduce payments for alterations not included in monthly rental payments by 5 percent of the amount of the alterations agreement; or

(3) Reduce the payments for violations by a Lessor's subcontractor by an amount not to exceed the amount of profit or fee reflected in the subcontract at the time the subcontract was placed.

(b) Prior to making a determination as set forth above, the HCA or designee shall provide to the Lessor a written notice of the action being considered and the basis therefor. The Lessor shall have a period determined by the agency head or designee, but not less than 30 calendar days after receipt of such notice, to submit in person, in writing, or through a representative, information and argument in opposition to the proposed reduction. The agency head or designee may, upon good cause shown, determine to deduct less than the above amounts from payments.

(c) The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law or under this lease.

INITIALS: 
Lessor Government

31. 52.215-22 - PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA (JAN 1991)

(Applies when cost or pricing data is required.)

(a) If any price, including profit or fee, negotiated in connection with this contract, or any cost reimbursable under this contract, was increased by any significant amount because (1) the Contractor or a subcontractor furnished cost or pricing data that were not complete, accurate, and current as certified in its Certificate of Current Cost or Pricing Data, (2) a subcontractor or prospective subcontractor furnished the Contractor cost or pricing data that were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost or Pricing Data, or (3) any of these parties furnished data of any description that were not accurate, the price or cost shall be reduced accordingly and the contract shall be modified to reflect the reduction.

(b) Any reduction in the contract price under paragraph (a) above due to defective data from a prospective subcontractor that was not subsequently awarded the subcontract shall be limited to the amount, plus applicable overhead and profit markup, by which (1) the actual subcontract or (2) the actual cost to the Contractor, if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor; provided, that the actual subcontract price was not itself affected by defective cost pricing data.

(c) (1) If the Contracting Officer determines under paragraph (a) of this clause that a price or cost reduction should be made, the Contractor agrees not to raise the following matters as a defense:

(i) The Contractor or subcontractor was a sole source supplier or otherwise was in a superior bargaining position and thus the price of the contract would not have been modified even if accurate, complete, and current cost or pricing data had been submitted.

(ii) The Contracting Officer should have known that the cost or pricing data in issue were defective even though the Contractor or subcontractor took no affirmative action to bring the character of the data to the attention of the Contracting Officer.

(iii) The contract was based on an agreement about the total cost of the contract and there was no agreement about the cost of each item procured under the contract.

(iv) The Contractor or subcontractor did not submit a Certificate of Current Cost or Pricing Data.

(2) (i) Except as prohibited by subdivision (c)(2)(ii) of this clause, an offset in an amount determined appropriate by the Contracting Officer based upon the facts shall be allowed against the amount of a contract price reduction if-

(A) The Contractor certifies to the Contracting Officer that, to the best of the Contractor's knowledge and belief, the Contractor is entitled to the offset in the amount requested; and

(B) The Contractor proves that the cost or pricing data were available before the date of agreement on the price of the contract (or price of the modification) and that the data were not submitted before such date.

(ii) An offset shall not be allowed if-

(A) The understated data was known by the Contractor to be understated when the Certificate of Current Cost or Pricing Data was signed; or

(B) The Government proves that the facts demonstrate that the contract price would not have increased in the amount to be offset even if the available data had been submitted before the date of agreement on price.

(d) If any reduction in the contract price under this clause reduces the price of items for which payment was made prior to the date of the modification reflecting the price reduction, the Contractor shall be liable to and shall pay the United States at the time such overpayment is repaid-

(1) Simple interest on the amount of such overpayment to be computed from the date(s) of overpayment to the Contractor to the date the Government is repaid by the Contractor at the applicable underpayment rate effective for each quarter prescribed by the Secretary of the Treasury under 26 U.S.C. 6621(a)(2); and

(2) For Department of Defense contracts only, a penalty equal to the amount of the overpayment, if the Contractor or subcontractor knowingly submitted cost or pricing data which were incomplete, inaccurate, or noncurrent.

32. 552.270-20 - PROPOSALS FOR ADJUSTMENT (AUG 1992)

(a) The Contracting Officer may, from time to time during the term of this lease, require changes to be made in the work or services to be performed and in the terms or conditions of this lease. Such changes will be required under the Changes clause.

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Lessor Government

(b) If the Contracting Officer makes a change within the general scope of the lease, the Lessor shall submit, in a timely manner, an itemized cost proposal for the work to be accomplished or services to be performed when the cost exceeds \$25,000. The proposal, including all subcontractor work, will contain at least the following details—

- (1) Material quantities and unit costs;
- (2) Labor costs (identified with specific item or material to be placed or operation to be performed);
- (3) Equipment costs;
- (4) Worker's compensation and public liability insurance;
- (5) Overhead;
- (6) Profit; and
- (7) Employment taxes under FICA and FUTA.

(c) The following Federal Acquisition Regulation (FAR) provisions also apply to all proposals exceeding \$100,000 in cost—

(1) The Lessor shall provide cost or pricing data including subcontractor cost or pricing data (48 CFR 15.804-2);

(2) The Lessor's representative, all contractors, and subcontractors whose portion of the work exceeds \$100,000 must sign and return the 'Certificate of Current Cost or Pricing Data' (48 CFR 15.804-4); and

(3) The agreement for 'Price Reduction for Defective Cost or Pricing Data' must be signed and returned (48 CFR 15.804-8).

(d) Lessors shall also refer to 48 CFR Part 31, Contract Cost Principles, for information on which costs are allowable, reasonable, and allocable in Government work.

33. 552.270-21 – CHANGES (AUG 1992)

(a) The Contracting Officer may at any time, by written order, make changes within the general scope of this lease in any one or more of the following:

- (1) Specifications (including drawings and designs);
- (2) Work or services; or
- (3) Facilities or space layout.

(b) If any such change causes an increase or decrease in Lessor's cost of or the time required for performance under this lease, whether or not changed by the order, the Contracting Officer shall modify this lease to provide for one or more of the following:

- (1) A modification of the delivery date;
- (2) An equitable adjustment in the rental rate;
- (3) A lump sum equitable adjustment; or
- (4) An equitable adjustment of the annual operating costs per square foot specified in this lease.


(c) The Lessor shall assert its right to an adjustment under this clause within 30 days from the date of receipt of the change order and shall submit a proposal for adjustment. Failure to agree to any adjustment shall be a dispute under the Disputes clause. However, nothing in this clause shall excuse the lessor from proceeding with the change as directed.

(d) Absent such written change order, the Government shall not be liable to Lessor under this clause.

34. 552.270-25 – ADJUSTMENT FOR VACANT PREMISES (JUNE 1985)

(a) If the Government fails to occupy any portion of the leased premises or vacates the premises in whole or in part prior to expiration of the firm term of the lease, the rental rate will be reduced.

(b) The rate will be reduced by that portion of the costs per square foot of operating expenses not required to maintain the space. Said reduction must occur after the Government gives 30 calendar days prior notice to the Lessor, and must continue in effect until the Government occupies the premises or the lease expires or is terminated.

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35. 52.215-1 - EXAMINATION OF RECORDS BY COMPTROLLER GENERAL (APR 1984)

(a) This clause applies if this contract exceeds \$10,000 and was entered into by negotiation.

(b) The Comptroller General of the United States or a duly authorized representative from the General Accounting Office shall, until 3 years after final payment under this contract or for any shorter period specified in Federal Acquisition Regulation (FAR) Subpart 4.7, Contractor Records Retention, have access to and the right to examine any of the Contractor's directly pertinent books, documents, paper, or other records involving transactions related to this contract.

(c) The Contractor agrees to include in first-tier subcontracts under this contract a clause to the effect that the Comptroller General or a duly authorized representative from the General Accounting Office shall, until 3 years after final payment under the subcontract or for any shorter period specified in FAR Subpart 4.7, have access to and the right to examine any of the subcontractor's directly pertinent books, documents, paper, or other records involving transactions related to the subcontract. "Subcontract," as used in this clause, excludes (1) purchase orders not exceeding \$10,000 and (2) subcontracts or purchase orders for public utility services at rates established to apply uniformly to the public, plus any applicable reasonable connection charge.

(d) The periods of access and examination in paragraphs (b) and (c) above for records relating to (1) appeals under the Disputes clause, (2) litigation or settlement of claims arising from the performance of this contract, or (3) costs and expenses of this contract to which the Comptroller General or a duly authorized representative from the General Accounting Office has taken exception shall continue until such appeals, litigation, claims, or exceptions are disposed of.

36. 552.215-70 - EXAMINATION OF RECORDS BY GSA (APR 1984)

The Contractor agrees that the Administrator of General Services or any duly authorized representatives shall, until the expiration of 3 years after final payment under this contract, or of the time periods for the particular records specified in Subpart 4.7 of the Federal Acquisition Regulation (48 CFR 4.7), whichever expires earlier, have access to and the right to examine any books, documents, papers, and records of the Contractor involving transactions related to this contract or compliance with any clauses thereunder. The Contractor further agrees to include in all its subcontracts hereunder a provision to the effect that the subcontractor agrees that the Administrator of General Services or any duly authorized representatives shall, until the expiration of 3 years after final payment under the subcontract, or of the time periods for the particular records specified in Subpart 4.7 of the Federal Acquisition Regulation (48 CFR 4.7), whichever expires earlier, have access to and the right to examine any books, documents, papers, and records of such subcontractor, involving transactions related to the subcontract or compliance with any clauses thereunder. The term "subcontract" as used in this clause excludes (a) purchase orders not exceeding \$10,000 and (b) subcontracts or purchase orders for public utility services at rates established for uniform applicability to the general public.



37. 52.233-1 - DISPUTES (DEC 1991)

(a) This contract is subject to the Contract Disputes Act of 1978, as amended (41 USC 601-613).

(b) Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

(c) "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. A claim arising under a contract, unlike a claim relating to that contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$50,000 is not a claim under the Act until certified as required by subparagraph (d)(2) below. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this clause, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

(d) (1) A claim by the Contractor shall be made in writing and submitted to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be subject to a written decision by the Contracting Officer.

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(2) For Contractor claims exceeding \$50,000, the Contractor shall submit with the claim a certification that—

- (i) The claim is made in good faith;
- (ii) Supporting data are accurate and complete to the best of the Contractor's knowledge and belief; and
- (iii) The amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable.

(3) (i) If the Contractor is an individual, the certification shall be executed by that individual.

(ii) If the Contractor is not an individual, the certification shall be executed by—

- (A) A senior company official in charge at the Contractor's plant or location involved; or
- (B) An officer or general partner of the Contractor having overall responsibility for the conduct of the Contractor's affairs.

(e) For Contractor claims of \$50,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor certified claims over \$50,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

(f) The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.

(g) At the time a claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use alternative means of dispute resolution. When using alternate dispute resolution procedures, any claim, regardless of amount, shall be accompanied by the certification described in paragraph (d)(2) of this clause, and executed in accordance with paragraph (d)(3) of this clause.

(h) The Government shall pay interest on the amount found due and unpaid from (1) the date the Contracting Officer receives the claim (properly certified if required), or (2) the date payment otherwise would be due, if that date is later, until the date of payment. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

(i) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

38. 552.270-40 – ASBESTOS AND HAZARDOUS WASTE MANAGEMENT (AUG 1992)

The certifications made by the Offeror regarding asbestos and hazardous waste management contained in the representation and certification provisions of this lease are material representations of fact upon which the Government relies when making award. If it is later determined that the presence or management of asbestos and/or hazardous waste has been misrepresented, the Government reserves the right to require the Lessor, at no cost to the Government, to abate (remove, encapsulate, enclose, or repair) such asbestos and/or mitigate hazardous waste conditions, with such work performed in accordance with Federal (e.g., EPA, OSHA, and DOT), State, and local regulations and guidance, or, alternatively, the Government may terminate the lease. This is in addition to other remedies available to the Government.



39. 52.222-18 – NOTIFICATION OF EMPLOYEE RIGHTS CONCERNING PAYMENT OF UNION DUES OR FEES (MAY 1992)

(a) During the term of this Contract, the contractor agrees to post a notice, of such size and in such form as the Secretary of Labor may prescribe, in conspicuous places in and about its plants and offices, including all places where notices to employees are customarily posted. The notice shall include the following information (except that the last sentence shall not be included in notices posted in the plants or offices of carriers subject to the Railway Labor Act, as amended (45 U.S.C. 151-188)):

Notice to Employees

Under Federal law, employees cannot be required to join a union or maintain membership in a union in order to retain their jobs. Under certain conditions, the law permits a union and an employer to enter into a union-security agreement requiring employees to pay uniform periodic dues and initiation fees. However, employees who are not union members can object to the use of their payments for certain

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purposes and can only be required to pay their share of union costs relating to collective bargaining, contract administration, and grievance adjustment.

If you believe that you have been required to pay dues or fees used in part to support activities not related to collective bargaining, contract administration, or grievance adjustment, you may be entitled to a refund and to an appropriate reduction in future payments.

For further information concerning your rights you may wish to contact either a Regional Office of the National Labor Relations Board or: National Labor Relations Board, Division of Information, 1717 Pennsylvania Avenue, NW., Washington, DC 20570.

(b) The Contractor will comply with all provisions of Executive Order 12800 of April 13, 1992, and related rules, regulations, and orders of the Secretary of Labor.

(c) In the event that the Contractor does not comply with any of the requirements set forth in paragraphs (a) or (b) of this clause, this contract may be cancelled, terminated, or suspended in whole or in part, and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in or adopted pursuant to Executive Order 12800 of April 13, 1992, or by rule, regulation, or order of the Secretary of Labor, or as are otherwise provided by law.

(d) The Contractor will include the provisions of paragraphs (a) through (c) in every subcontract or purchase order entered into in connection with this contract unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 3 of Executive Order 12800 of April 13, 1992, so that such provision will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any such subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions, including the imposition of sanctions for noncompliance; Provided, however, That if the Contractor becomes involved in litigation with a subcontractor or vendor, or is threatened with such involvement, as a result of such direction, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

40. 52.222-26 - EQUAL OPPORTUNITY (APR 1984)

(Applicable to leases which exceed \$10,000.)

(a) If, during any 12-month period (including the 12 months preceding the award of this contract), the Contractor has been or is awarded nonexempt Federal contracts and/or subcontracts that have an aggregate value in excess of \$10,000, the Contractor shall comply with subparagraphs (b)(1) through (11) below. Upon request, the Contractor shall provide information necessary to determine the applicability of this clause.

(b) During performing this contract, the Contractor agrees as follows:

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin.

(2) The Contractor shall take affirmative action to ensure the applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. This shall include, but not be limited to, (i) employment, (ii) upgrading, (iii) demotion, (iv) transfer, (v) recruitment or recruitment advertising, (vi) layoff or termination, (vii) rates of pay or other forms of compensation, and (viii) selection for training, including apprenticeship.

(3) The Contractor shall post in conspicuous places available to employees and applicants for employment the notices to be provided by the Contracting Officer that explain this clause.

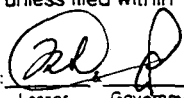
(4) The Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(5) The Contractor shall send, to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, the notice to be provided by the Contracting Officer advising the labor union or workers' representative of the Contractor's commitments under this clause, and post copies of the notice in conspicuous places available to employees and applicants for employment.

(6) The Contractor shall comply with Executive Order 11246, as amended, and the rules, regulations, and orders of the Secretary of Labor.

(7) The Contractor shall furnish to the contracting agency all information required by Executive Order 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor. Standard Form 100 (EEO-1), or any successor form, is the prescribed form to be filed within 30 days following the award, unless filed within 12 months preceding the date of award.

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(8) The Contractor shall permit access to its books, records, and accounts by the contracting agency or the Office of Federal Contract Compliance Programs (OFCCP) for the purpose of investigation to ascertain the Contractor's compliance with the applicable rules, regulations, and orders.

(9) If the OFCCP determines that the Contractor is not in compliance with this clause or any rule, regulation, or order of the Secretary of Labor, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts, under the procedures authorized in Executive Order 11246, as amended. In addition, sanctions may be imposed and remedies invoked against the Contractor as provided in Executive Order 11246, as amended, the rules, regulations, and orders of the Secretary of Labor, or as otherwise provided by law.

(10) The Contractor shall include the terms and conditions of subparagraph (b)(1) through (11) of this clause in every subcontract or purchase order that is not exempted by the rules, regulations, or orders of the Secretary of Labor issued under Executive Order 11246, as amended, so that these terms and conditions will be binding upon each subcontractor or vendor.

(11) The Contractor shall take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing these terms and conditions, including sanctions for noncompliance; provided, that if the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of any direction, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

(c) Notwithstanding any other clause in this contract, disputes relative to this clause will be governed by the procedures in 41 CFR 60-1.1.

41. 52.222-35 - AFFIRMATIVE ACTION FOR SPECIAL DISABLED AND VIETNAM ERA VETERANS
(APR 1984)

(Applicable to leases which exceed \$10,000.)

(a) Definitions.

Appropriate office of the State employment service system, as used in this clause, means the local office of the Federal-State national system of public employment offices assigned to serve the area where the employment opening is to be filled, including the District of Columbia, Guam, Puerto Rico, Virgin Islands, American Samoa, and the Trust Territory of the Pacific Islands.

Openings that the Contractor proposes to fill from within its own organization, as used in this clause, means employment openings for which no one outside the Contractor's organization (including any affiliates, subsidiaries, and the parent companies) will be considered and includes any openings that the Contractor proposes to fill from regularly established "recall" lists.

Opening that the Contractor proposes to fill under a customary and traditional employer-union hiring arrangement, as used in this clause, means employment openings that the Contractor proposes to fill from union halls, under their customary and traditional employer-union hiring relationship.

Suitable employment openings, as used in this clause—

(1) Includes, but is not limited to, openings that occur in jobs categorized as—

(i) Production and nonproduction;

(ii) Plant and office;

(iii) Laborers and mechanics;

(iv) Supervisory and nonsupervisory;

(v) Technical; and

(vi) Executive, administrative, and professional positions compensated on a salary basis of

less than \$25,000 a year; and

(2) Includes full-time employment, temporary employment of over 3 days, and part-time employment, but not openings that the Contractor proposes to fill from within its own organization or under a customary and traditional employer-union hiring arrangement, nor openings in an educational institution that are restricted to students of that institution.

(b) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against the individual because the individual is a special disabled or Vietnam era veteran. The Contractor agrees to take affirmative action to employ, advance in employment, and otherwise treat qualified special disabled and Vietnam era veterans without discrimination based upon their disability or veterans' status in all employment practices such as—

(i) Employment;

(ii) Upgrading;

(iii) Demotion or transfer;

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- (iv) Recruitment;
- (v) Advertising;
- (vi) Layoff or termination;
- (vii) Rates of pay or other forms of compensation; and
- (viii) Selection for training, including apprenticeship.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Vietnam Era Veterans' Readjustment Assistance Act of 1972 (the Act), as amended.

(c) Listing openings. (1) The Contractor agrees to list all suitable employment openings existing at contract award or occurring during contract performance, at an appropriate office of the State employment service system in the locality where the opening occurs. These openings include those occurring at any contractor facility, including one not connected with performing this contract. An independent corporate affiliate is exempt from this requirement.

(2) State and local government agencies holding Federal contracts of \$10,000 or more shall also list all their suitable openings with the appropriate office of the State employment service.

(3) The listing of suitable employment openings with the State employment service system is required at least concurrently with using any other recruitment source or effort and involves the obligations of placing a bona fide job order, including accepting referrals of veterans and nonveterans. This listing does not require hiring any particular job applicant or hiring from any particular group of job applicants and is not intended to relieve the Contractor from any requirements of Executive orders or regulations concerning nondiscrimination in employment.

(4) Whenever the Contractor becomes contractually bound to the listing terms of this clause, it shall advise the State employment service system, in each State where it has establishments, of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these terms and has so advised the State system, it need not advise the State system of subsequent contracts. The Contractor may advise the State system when it is no longer bound by this contract clause.

(5) Under the most compelling circumstances, an employment opening may not be suitable for listing, including situations when (i) the Government's needs cannot reasonably be supplied, (ii) listing would be contrary to National security, or (iii) the requirement of listing would not be in the Government's interest.

(d) Applicability. (1) This clause does not apply to the listing of employment openings which occur and are filled outside the 50 states, the District of Columbia, Puerto Rico, Guam, Virgin Islands, American Samoa, and the Trust Territory of the Pacific Islands.

(2) The terms of paragraph (c) above of this clause do not apply to openings that the Contractor proposes to fill from within its own organization or under a customary and traditional employer-union hiring arrangement. This exclusion does not apply to a particular opening once an employer decides to consider applicants outside of its own organization or employer-union arrangement for that opening.



(e) Postings. (1) The Contractor agrees to post employment notices stating (i) the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified special disabled veterans and veterans of the Vietnam era, and (ii) the rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. They shall be in a form prescribed by the Director, Office of Federal Contract Compliance Programs, Department of Labor (Director), and provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of the Act, and is committed to take affirmative action to employ, and advance in employment, qualified special disabled and Vietnam era veterans.

(f) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(g) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Director to enforce the terms, including action for noncompliance.

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42. 52.222-36 - AFFIRMATIVE ACTION FOR HANDICAPPED WORKERS (APR 1984)

(Applicable to leases which exceed \$2,500.)

(a) General. (1) Regarding any position for which the employee or applicant for employment is qualified, the Contractor shall not discriminate against any employee or applicant because of physical or mental handicap. The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified handicapped individuals without discrimination based upon their physical or mental handicap in all employment practices such as—

- (i) Employment;
- (ii) Upgrading;
- (iii) Demotion or transfer;
- (iv) Recruitment;
- (v) Advertising;
- (vi) Layoff or termination;
- (vii) Rates of pay or other forms of compensation; and
- (viii) Selection for training, including apprenticeship.

(2) The Contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor (Secretary) issued under the Rehabilitation Act of 1973 (29 USC 793) (the Act), as amended.

(b) Postings. (1) The Contractor agrees to post employment notices stating (i) the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified handicapped individuals and (ii) the rights of applicants and employees.

(2) These notices shall be posted in conspicuous places that are available to employees and applicants for employment. They shall be in a form prescribed by the Director, Office of Federal Contract Compliance Programs, Department of Labor (Director), and provided by or through the Contracting Officer.

(3) The Contractor shall notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of Section 503 of the Act and is committed to take affirmative action to employ, and advance in employment, qualified physically and mentally handicapped individuals.

(c) Noncompliance. If the Contractor does not comply with the requirements of this clause, appropriate actions may be taken under the rules, regulations, and relevant orders of the Secretary issued pursuant to the Act.

(d) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order in excess of \$2,500 unless exempted by rules, regulations, or orders of the Secretary. The Contractor shall act as specified by the Director to enforce the terms, including action for noncompliance.

43. 52.222-37 - EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA (JAN 1988)

(Applicable to leases which exceed \$10,000.)

(a) The Contractor shall report at least annually, as required by the Secretary of Labor, on:

(1) The number of special disabled veterans and the number of veterans of the Vietnam era in the workforce of the contractor by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of that total, the number of special disabled veterans, and the number of veterans of the Vietnam era.

(b) The above items shall be reported by completing the form entitled "Federal Contractor Veterans' Employment Report VETS-100."

(c) Reports shall be submitted no later than March 31 of each year beginning March 31, 1988.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date: (1) As of the end of any pay period during the period January through March 1 of the year the report is due, or (2) as of December 31, if the Contractor has previous written approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

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(e) The count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each Contractor subject to the reporting requirements at 38 U.S.C. 2012(d) shall invite all special disabled veterans and veterans of the Vietnam era who wish to benefit under the affirmative action program at 38 U.S.C. 2012 to identify themselves to the Contractor. The invitation shall state that the information is voluntarily provided, that the information will be kept confidential, that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment, and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 2012.

(f) Subcontracts. The Contractor shall include the terms of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

44. 52.209-6 - PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (JUNE 1991)

(a) The Government suspends or debar Contractors to protect the Government's interests. Contractors shall not enter into any subcontract in excess of the small purchase limitation at FAR 13.000 with a Contractor that has been debarred, suspended, or proposed for debarment unless there is a compelling reason to do so.

(b) The Contractor shall require each proposed first-tier subcontractor, whose subcontract will exceed the small purchase limitation at FAR 13.000, to disclose to the Contractor, in writing, whether as of the time of award of the subcontract, the subcontractor, or its principals, is or is not debarred, suspended, or proposed for debarment by the Federal Government.

(c) A corporate officer or designee of the Contractor shall notify the Contracting Officer, in writing, before entering into a subcontract with a party that is debarred, suspended or proposed for debarment (See FAR 9.404 for information on the List of Parties Excluded from Procurement Programs). The notice must include the following:

- (1) The name of the subcontractor;
- (2) The Contractor's knowledge of the reasons for the subcontractor being on the List of Parties Excluded from Procurement Programs;
- (3) The compelling reason(s) for doing business with the subcontractor notwithstanding its inclusion on the List of Parties Excluded from Procurement Programs;
- (4) The systems and procedures the Contractor has established to ensure that it is fully protecting the Government's interests when dealing with such subcontractor in view of the specific basis for the party's debarment, suspension, or proposed debarment.

45. 52.215-24 - SUBCONTRACTOR COST OR PRICING DATA (DEC 1991)

(Applies when the clause 52.215-22 is applicable.)

(a) Before awarding any subcontract expected to exceed \$100,000, or for the Department of Defense, the National Aeronautics and Space Administration and the Coast Guard, expected to exceed \$500,000, when entered into, or before pricing any subcontract modification involving a pricing adjustment expected to exceed \$100,000, or for the Department of Defense, the National Aeronautics and Space Administration and the Coast Guard, expected to exceed \$500,000, the Contractor shall require the subcontractor to submit cost or pricing data (actually or by specific identification in writing), unless the price is—

- (1) Based on adequate price competition;
- (2) Based on established catalog or market prices of commercial items sold in substantial quantities to the general public; or
- (3) Set by law or regulation.

(b) The Contractor shall require the subcontractor to certify in substantially the form prescribed in subsection 15.804-4 of the Federal Acquisition Regulation (FAR) that, to the best of its knowledge and belief, the data submitted under paragraph (a) of this clause were accurate, complete, and current as of the date of agreement on the negotiated price of the subcontract or subcontract modification.

(c) In each subcontract that exceeds \$100,000, or for the Department of Defense, the National Aeronautics and Space Administration, and the Coast Guard, expected to exceed \$500,000, when entered into, the Contractor shall insert either—

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(1) The substance of this clause, including this paragraph (c), if paragraph (a) above requires submission of cost or pricing data for the subcontract; or

(2) The substance of the clause at FAR 52.215-25, Subcontractor Cost or Pricing Data—Modifications.

46. 52.219-8 – UTILIZATION OF SMALL BUSINESS CONCERNS AND SMALL DISADVANTAGED BUSINESS CONCERNS (FEB 1990)

(Applicable to leases which exceed \$25,000.)

(a) It is the policy of the United States that small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals shall have the maximum practicable opportunity to participate in performing contracts let by any Federal agency, including contracts and subcontracts for subsystems, assemblies, components, and related services for major systems. It is further the policy of the United States that its prime contractors establish procedures to ensure the timely payment of amounts due pursuant to the terms of their subcontracts with small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals.

(b) The Contractor hereby agrees to carry out this policy in the awarding of subcontracts to the fullest extent consistent with efficient contract performance. The Contractor further agrees to cooperate in any studies or surveys as may be conducted by the United States Small Business Administration or the awarding agency of the United States as may be necessary to determine the extent of the Contractor's compliance with this clause.

(c) As used in this contract, the term "small business concern" shall mean a small business as defined pursuant to section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto. The term "small business concern owned and controlled by socially and economically disadvantaged individuals" shall mean a small business concern (1) which is at least 51 percent unconditionally owned by one or more socially and economically disadvantaged individuals; or, in the case of any publicly owned business, at least 51 percent of the stock of which is unconditionally owned by one or more socially and economically disadvantaged individuals; and (2) whose management and daily business operations are controlled by one or more of such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one of these entities which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets the requirements of 13 CFR 124. The Contractor shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Subcontinent Asian Americans, and other minorities, or any other individual found to be disadvantaged by the Administration pursuant to section 8(a) of the Small Business Act. The Contractor shall presume that socially and economically disadvantaged entities also include Indian Tribes and Native Hawaiian Organizations.

(d) Contractors acting in good faith may rely on written representations by their subcontractors regarding their status as either a small business concern or a small business concern owned and controlled by socially and economically disadvantaged individuals.

47. 52.219-9 – SMALL BUSINESS AND SMALL DISADVANTAGED BUSINESS SUBCONTRACTING PLAN (JAN 1991)



(Applicable to leases which exceed \$500,000.)

This clause incorporates the clause at FAR 52.219-9 by reference. It has the same force and effect as if it were included in full text. Upon request, the contracting officer will make the full text available.

48. 52.219-16 – LIQUIDATED DAMAGES—SMALL BUSINESS SUBCONTRACTING PLAN (VARIATION) (AUG 1989)

(Applicable to leases which exceed \$500,000)

(a) "Failure to make a good faith effort to comply with the subcontracting plan," as used in this clause, means a willful or intentional failure to perform in accordance with the requirements of the subcontracting plan approved under the clause in this contract entitled "Small Business and Small Disadvantaged Business Subcontracting Plan," or willful or intentional action to frustrate the plan.

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(b) If, at contract completion, or in the case of a commercial products plan, at the close of the fiscal year for which the plan is applicable, the Contractor has failed to meet its subcontracting goals and the Contracting Officer decides in accordance with paragraph (c) of this clause that the Contractor failed to make a good faith effort to comply with its subcontracting plan, established in accordance with the clause in this contract entitled Small and Small Disadvantaged Business Subcontracting Plans, the Contractor shall pay the Government liquidated damages in an amount stated. The amount of damages attributable to the Contractor's failure to comply shall be an amount equal to the actual dollar amount by which the Contractor failed to achieve each subcontract goal or, in the case of a commercial products plan, that portion of the dollar amount allocable to Government contracts by which the Contractor failed to achieve each subcontract goal.

(c) Before the Contracting Officer makes a final decision that the Contractor has failed to make such good faith effort, the Contracting Officer shall give the Contractor written notice specifying the failure and permitting the contractor to demonstrate what good faith efforts have been made. Failure to respond to the notice may be taken as an admission that no valid explanation exists. If, after consideration of all pertinent data, the Contracting Officer finds that the Contractor failed to make a good faith effort to comply with the subcontracting plan, the Contracting Officer shall issue a final decision to that effect and require that the contractor pay the Government liquidated damages as provided in paragraph (b) of this clause.

(d) The Contractor shall have right of appeal, under the clause in this contract entitled Disputes, from any final decision of the Contracting Officer.

(e) Liquidated damages shall be in addition to any other remedies that the Government may have.

49. 52.219-13 - UTILIZATION OF WOMEN-OWNED SMALL BUSINESSES (AUG 1986)

(a) "Women-owned small businesses," as used in this clause, means businesses that are at least 51 percent owned by women who are United States citizens and who also control and operate the business.

"Control," as used in this clause, means exercising the power to make policy decisions.

"Operate," as used in this clause, means being actively involved in the day-to-day management of the business.

"Small business concern," as used in this clause, means a concern including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR 121.

(b) It is the policy of the United States that women-owned small businesses shall have the maximum practicable opportunity to participate in performing contracts awarded by any Federal agency.

(c) The Contractor agrees to use its best efforts to give women-owned small businesses the maximum practicable opportunity to participate in the subcontracts it awards to the fullest extent consistent with the efficient performance of its contract.

(d) The Contractor may rely on written representations by its subcontractors regarding their status as women-owned small businesses.

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REPRESENTATIONS AND CERTIFICATIONS (Acquisition of Leasehold Interests in Real Property)	Solicitation Number	Dated
	GS-11B-90206	3-8-93

Complete appropriate boxes, sign the form, and attach to offer.

The Offeror makes the following Representations and Certifications. NOTE: The "Offeror," as used on this form, is the owner of the property offered, not an individual or agent representing the owner.

1. 552.219-1 SMALL BUSINESS CONCERN REPRESENTATION (MAY 1991) (VARIATION)

The Offeror represents and certifies as part of its offer that it [] is, ☒ is not a small business concern. "Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the size standards in this solicitation.

2. SMALL BUSINESS SIZE STANDARD (MAR 1992)

The small business size standard applicable to this acquisition is annual average gross receipts of \$10 million or less for the preceding three fiscal years.

3. 52.219-2 - SMALL DISADVANTAGED BUSINESS CONCERN REPRESENTATION (FEB 1990)

(a) Representation. The Offeror represents that it [] is, ☒ is not a small disadvantaged business concern.

(b) Definitions.

"Asian Pacific Americans," as used in this provision, means United States citizens whose origins are in Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the U.S. Trust Territory of the Pacific Islands (Republic of Palau), the Northern Mariana Islands, Laos, Kampuchea (Cambodia), Taiwan, Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Republic of the Marshall Islands, or the Federated States of Micronesia.

"Indian tribe," as used in this provision, means any Indian tribe, band, nation, or other organized group or community of Indians, including any Alaska Native Corporation as defined in 13 CFR 124.100 which is recognized as eligible for the special programs and services provided by the U.S. to Indians because of their status as Indians, or which is recognized as such by the State in which such tribe, band, nation, group, or community resides.

"Native Americans," as used in this provision, means American Indians, Eskimos, Aleuts, and native Hawaiians.

"Native Hawaiian Organization," as used in this provision, means any community service organization serving Native Hawaiians in, and chartered as a not-for-profit organization by, the State of Hawaii, which is controlled by Native Hawaiians, and whose business activities will principally benefit such Native Hawaiians.

"Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR 121.

"Small disadvantaged business concern," as used in this provision, means a small business concern that (a) is at least 51 percent unconditionally owned by one or more individuals who are both socially and economically disadvantaged, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more socially and economically disadvantaged individuals and (b) has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one of these entities which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets the requirements of 13 CFR 124.

"Subcontinent Asian Americans," as used in this provision, means United States citizens whose origins are in India, Pakistan, Bangladesh, Sri Lanka, Bhutan, or Nepal.

(c) Qualified groups. The Offeror shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Subcontinent Asian Americans, and other individuals found to be qualified by SBA under 13 CFR 124. The Offeror shall presume that socially and economically disadvantaged entities also include Indian tribes and Native Hawaiian Organizations.

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4. 52.219-3 - WOMEN-OWNED SMALL BUSINESS REPRESENTATION (APR 1984)

- (a) Representation. The Offeror represents that it ☒ is, ☐ is not a women-owned small business concern.
- (b) Definitions.

"Small business concern," as used in this provision, means a concern including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR 121.

"Women-owned," as used in this provision, means a small business that is at least 51 percent owned by a woman or women who are U.S. citizens and who also control and operate the business.

5. 52.222-22 - PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (APR 1984)

The Offeror represents that —

(a) It ☐ has, ☒ has not participated in a previous contract or subcontract subject either to the Equal Opportunity clause of this solicitation, the clause originally contained in Section 310 of Executive Order No. 10925, or the clause contained in Section 201 of Executive Order No. 11114;

(b) It ☒ has, ☐ has not filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards. (Approved by OMB under Control Number 1215-0072.)

6. 52.222-25 - AFFIRMATIVE ACTION COMPLIANCE (APR 1984)

(Applies to contracts which include the clause at FAR 52.222-26, Equal Opportunity.)

The Offeror represents that —

(a) It ☒ has developed and has on file, ☐ has not developed and does not have on file, at each establishment affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2), or

(b) It ☒ has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor. (Approved by OMB under Control Number 1215-0072.)

7. 52.222-21 - CERTIFICATION OF NONSEGREGATED FACILITIES (APR 1984)

(a) "Segregated facilities," as used in this provision, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin because of habit, local custom, or otherwise.

(b) By the submission of this offer, the Offeror certifies that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Offeror agrees that a breach of this certification is a violation of the Equal Opportunity clause in the contract.

(c) The Offeror further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will—

(1) Obtain identical certifications from proposed subcontractors before the award of subcontracts under which the subcontractor will be subject to the Equal Opportunity clause;

(2) Retain the certifications in the files; and

(3) Forward the following notice to the proposed subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods).

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATIONS OF NONSEGREGATED FACILITIES..

A Certification of Nonsegregated Facilities must be submitted before the award of a subcontract under which the subcontractor will be subject to the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

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3. 552.203-4 - CONTINGENT FEE REPRESENTATION AND AGREEMENT (MAY 1989)

(a) Representation. The Offeror represents that, except for full-time bona fide employees working solely for the Offeror or bona fide established real estate agents or brokers maintained by the Offeror for the purpose of securing business, the Offeror —

Note: The Offeror must check the appropriate boxes. For interpretation of the term "bona fide employee or agency," see paragraph (b) of the Covenant Against Contingent Fees clause.]

- (1) ☒ Has ☒ has not, employed or retained any company or persons to solicit or obtain this lease; and
(2) ☒ Has ☒ has not, paid or agreed to pay to any person or company employed or retained to solicit or obtain this contract any commission, percentage, brokerage, or other fee contingent upon or resulting from the award of this contract.

(b) Agreement. The Offeror agrees to provide information relating to the above Representation as requested by the Contracting Officer and, when subparagraph (a)(1) or (a)(2) is answered affirmatively, to promptly submit to the Contracting Officer —

- (1) A completed Standard Form 119, Statement of Contingent or Other Fees, (SF 119); or
(2) A signed statement indicating that the SF 119 was previously submitted to the same contracting office, including the date and applicable solicitation or contract number, and representing that the prior SF 119 applies to this offer or quotation.

3. 52.203-02 - CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)

(a) The Offeror certifies that—

- (1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other Offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the methods or factors used to calculate the prices offered;
(2) The prices in this offer have not been and will not be knowingly disclosed by the Offeror, directly or indirectly, to any other Offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and
(3) No attempt has been made or will be made by the Offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory—

- (1) is the person in the Offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or
(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above
Karen P. Lawrence (insert full name of person(s) in the Offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the Offeror's organization);
(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and
(iii) As an agent, has not personally participated, and will not participate, in action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the Offeror deletes or modifies subparagraph (a)(2) above, the Offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

10. 52.203-11 CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (APR 1991) (DEVIATION)

(Applies to leases which exceed \$100,000.)

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, are hereby incorporated by reference in paragraph (b) of this certification.

(b) The Offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989,—

- (1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of a contract resulting from this solicitation.
(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and

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(3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

11. 52.209-5 - CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (MAY 1989)

(a) (1) The Offeror certifies, to the best of its knowledge and belief, that—

(i) The Offeror and/or any of its Principals—

(A) Are ☐ are not ☒ presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have ☐ have not ☒ within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) contract or subcontract; violation of Federal or State antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property; and

(C) Are ☐ are not ☒ presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.

(ii) The Offeror has ☐ has not ☒ within a three year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18 UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

12. ASBESTOS REPRESENTATION (MAR 1992)

The Offeror represents and certifies as part of its offer that the space offered for lease, common building areas, ventilation systems and zones serving the space offered, and the area above suspended ceilings and engineering space in the same ventilation zones as the space offered —

(a) ☐ Does, ☒ does not include asbestos-containing materials (ACM). ACM as used in this provision is defined as any materials with a concentration of 1 percent or greater by dry weight of asbestos fibers.

(b) If any of the above areas include ACM, please indicate whether the materials are

- | | |
|--|---|
| (1) friable | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| (2) non-friable, in good condition, and located in a place where they are not likely to be disturbed during the term of any ensuing lease contract | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| (3) in a solid matrix, already in place, and in good condition | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

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3. CERTIFICATION FOR PAST OR PRESENT HAZARDOUS WASTE OPERATIONS (NOV 1987)

To the best of his or her knowledge, the Offeror represents and certifies, as part of the offer that the site upon which space is offered or lease to the Government —

(a) ☐ Was, ☒ was not a site used for any of the operations listed in item b below.

(b) Was a site used for any or all of the following operations:

- | | |
|---|---|
| (1) generation of hazardous waste | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| (2) treatment, temporary/permanent storage, or disposal of solid or hazardous waste | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| (3) storage of hazardous substances or petroleum products | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| (4) used/waste oil storage or reclamation units | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| (5) laboratory or rifle range | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| (6) chemical manufacturing/storage | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| (7) military or intelligence weapons or ammunition training or testing | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| (8) ordnance and/or weapons production, storage, or handling | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

(c) If any of the above operations ever occurred at the site, the Offeror certifies that appropriate cleanup or other action ☐ was, ☐ was not performed in accordance with the local, state and Federal laws.

4. RADON CERTIFICATION

(a) The Offeror certifies as part of its offer that the portion of the space proposed for lease or acquisition by the Government which is in ground contact or closest to the ground (i.e., if space offered is on floors 4 through 8, certification is required for the 4th floor only) has been measured for radon. Radon detectors were placed throughout the required area to ensure each detector covered no more than 2,000 square feet of space. Radon analyses were performed by a laboratory successfully participating in the Environmental Protection Agency-sponsored Radon Measurement Proficiency Program. The highest radon level was found to be —

☒ Below 4 picocuries per liter (pCi/l)
☐ 4 pCi/l or greater, but less than 200 pCi/l
☐ 200 pCi/l or greater

(b) The highest radon level measured was _____.

Updated measurements are currently being taken. Results will be provided when available.

(c) The measurement method used was EPA.

15. 52.223-5 - CERTIFICATION REGARDING A DRUG-FREE WORKPLACE (JUL 1990)

(a) Definitions. As used in this provision, "Controlled substance" means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11-1308.15.

"Conviction" means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

"Criminal drug statutes" means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession or use of any controlled substance.

"Drug-free workplace" means the site(s) for the performance of work done by the Contractor in connection with a specific contract at which employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

"Employee" means an employee of a Contractor directly engaged in the performance of work under a Government contract. Directly engaged is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

"Individual" means an Offeror/contractor that has no more than one employee including the Offeror/contractor.

(b) By submission of its offer, the Offeror, if other than an individual, who is making an offer that equals or exceeds \$25,000, certifies and agrees that, with respect to all employees of the Offeror to be employed under a contract resulting from this solicitation, that, no later than 30 calendar days after contract award (unless a longer period is agreed to in writing), for contracts of 30 calendar days or more performance duration, or as soon as possible, for contracts of less than 30 calendar days performance duration, but in any case, by a date prior to when performance is expected to be completed, it will —

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(1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about -

- (i) The dangers of drug abuse in the workplace;
- (ii) The contractor's policy of maintaining drug-free workplace;
- (iii) Any available drug counseling, rehabilitation, and employee assistance programs; and
- (iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.

(3) Provide all employees engaged in performance of the contract with a copy of a statement required by subparagraph (b)(1) of this clause;

(4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this provision that, as a condition of continued employment on the contract resulting from this solicitation, the employee will -

- (i) Abide by the terms of the statement; and
- (ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 calendar days after such conviction;

(5) Notify the contracting officer in writing within 10 calendar days after receiving notice under subdivision (b)(4)(ii) of this provision, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position and title of the employee; and

(6) Within 30 calendar days after receiving notice under subdivision (b)(4)(ii) of this provision of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:

- (i) Taking appropriate personnel action against such employee, up to and including termination; or
- (ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health law enforcement, or other appropriate agency.

(7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraph (b)(1) through (b)(6) of this clause.

(c) By submission of its offer, the Offeror, if an individual who is making an offer of any dollar value, certifies and agrees that the Offeror will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in the performance of this contract resulting from this solicitation.

(d) Failure of the Offeror to provide the certification required by paragraph (b) or (c) of this provision, renders the Offeror unqualified and ineligible for award. (See FAR 9.104-1(g) and 19.602-1(a)(2)(i).)

(e) In addition to other remedies available to the Government, the certification in paragraphs (b) or (c) of this provision concerns a matter within the jurisdiction of an agency of the United States and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

16. 52.204-3 TAXPAYER IDENTIFICATION (SEP 1989) (VARIATION)

(a) The Offeror is required to submit taxpayer identification information in order to comply with reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M and implementing regulations issued by the Internal Revenue Service (IRS). Failure or refusal by the Offeror to furnish the information may result in a 20 percent reduction of payments otherwise due under the contract. Taxpayer information on the payee, if different from the offeror, is also required; however, it may be provided at the time of award.

(b) Offeror's Taxpayer Identification Number (TIN).

☒ TIN: [REDACTED] [] TIN has been applied for. [] TIN is not required.

(c) Corporate Status.

[] Corporation; [] Not a corporate entity; [] Sole proprietorship ☒ Partnership

(d) Common Parent.

"Common parent," as used in this solicitation provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the Offeror is a member.

☒ Offeror is not owned or controlled by a common parent.

[] Name and TIN of common parent: Name _____ TIN _____

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VA024422



4451 Parliament Place
Lanham, MD 20706
301/306-0632
FAX: 301/306-9354

Plymouth Greene Office Campus A-1
801 E. Germantown Pike
Norristown, PA 19401
215/277-4520
FAX: 215/277-6099

November 17, 1989

RADON SURVEY

SKYLINE V

BLDG #: VA0244ZZ

OMC Project #: 038-SKYL5-02

Performed For:

GSA-NCR-WPX
General Services Administration
Safety and Environmental Management
7th & D Streets, SW
Room 2036
Washington, DC 20407

Contract: #GS-P1187MJD-0030

Work Order: #P1189DC6192

Attn: C. Williams

On July 27, 1989, OMC placed 19 long-term radon detectors (total includes duplicates and blanks) in Skyline V, 5111 Leesburg Pike. The detectors were placed on the 5th and 6th Floors (GSA occupied space) in order to determine exposure levels throughout the areas. The detectors were collected on October 17, 1989 and submitted for laboratory analysis.

Background

Radon is a naturally occurring inert radioactive gas emitted from the breakdown (radioactive decay) of uranium rock beds. Radon is also found in soils and rocks containing granite, shale, phosphate, and pitchblende, which are widely distributed in the earth's crust. Radon concentrations are expressed as picocuries per liter (pCi/l) of air. A picocurie is a commonly used unit of measure in radioactivity.

Radon gas itself is not a major concern to human health. The problem is that radon continues to undergo radioactive decay, producing new naturally radioactive materials. These decay products, or progeny, which are solids, not gases, can attach to surfaces, such as dust particles. The dust particles may be inhaled and deposited in the

lung, damaging the tissue of the lung lining. Studies have indicated that the result of extended exposure to high levels of radon gas increases the risk of lung cancer.

Outdoor radon concentrations in the northern hemisphere are approximately 0.1 to 0.15 picocuries per liter (pCi/l). The concentration varies, according to barometric pressure, precipitation, time of day, local uranium presence, soil structure, and land use. Generally, outdoor radon is so diluted in the atmosphere it is of minor concern. But radon can diffuse through cracks and openings into the basements of buildings. The gas then becomes trapped in a comparatively small air volume. Because the radon in a building has less air with which to mix, indoor concentrations are usually higher than those found outdoors.

Radon gas does not readily form chemical compounds with other elements. Since it is not attracted to other chemicals, it diffuses through many materials. The gas can seep into buildings through cracks and joints in concrete floors, from soil-backed block walls in basements, and around pipes penetrating walls and slabs. Buildings with dirt floors or crawl spaces are particularly suspect.

The Environmental Protection Agency (EPA) has established a residential action level for radon of 4 picocuries of radon per liter of air. Concentration levels at or above 4 pCi/l require corrective action. The average winter concentration in U.S. homes is 1 to 2 pCi/l. An Action Level for commercial or office buildings has not been established thus far.

Methodology

Detector Type

Long term samples were collected with alpha-track detectors. Alpha-track detectors consist of a small sheet of a special plastic material. The material is permanently marked when struck by alpha particles, which are emitted by the decay of radon gas. The detector is constructed to allow radon gas to diffuse into it, and then it records the natural decay of the captive gas.

After 81 days, the detectors were collected and returned to the manufacturer, Target Laboratories, Columbia, Maryland, where the "tracks" on the plastic sheet were counted through a microscope. The tracks were converted to radon concentrations in pCi/l for the time of exposure. Target Laboratories is a participant in the EPA's Radon/Radon Progeny Measurement Proficiency Program.

Detector Placement

The GSA Sampling Protocol called for placement throughout the areas of the building in ground contact (below and on grade), with each detector covering no more than approximately 2,000 square feet. Detectors were placed in areas that were occupied, occupiable or routinely visited. They were placed in rooms expected to have low ventilation rates, such as interior rooms with no windows and tight doors. Areas where cracks in walls or floors, where there were penetrations of walls or floors (e.g., pipes), areas with outside

corners, and where construction or expansion joints were present were also tested. Blanks (unexposed) and duplicate samples were submitted as well.

For each detector, a "Radon Detector Location Questionnaire" was completed. The questionnaires indicating the location of each detector are included in this report. The diagrams were not easily accessible therefore are not included in this report.

Results

All sample concentrations for radon were well below the EPA residential action level of 4 pCi/l. The detected levels of radon ranged from 0.9 pCi/l to 3.3 pCi/l. Since the average office occupant spends less time in the office than at home, response actions for this building are not necessary at this time. Analytical results and sample locations are summarized in the attached table(s). Detector #108404 located on the 5th Floor, Suite 553, far right corner next to filing cabinets. Therefore, 18 out of 19 detectors are included in this report.

Should you have any questions concerning this matter, please do not hesitate to contact this office.

Sincerely,

(b) (6)

Kimberle Noffsinger
Industrial Hygienist

(b) (6)

Michael A. Cecil, CIH
Manager, Industrial Hygiene Services

KN/cy

SKYLINE V

Building Number DC0244ZZ

RADON SAMPLING RESULTS

Sampling Period: 7/27/89 to 10/17/89

Sheet/Batch #: 3-205

Etch Batch #: 180

Automated Counting

Calibration Factor: 33.75 pCi/liter-day per track/sq mm

Background: 0.4 pCi/liter-90 day per sq mm

DETECTOR SERIAL NUMBER	SAMPLE LOCATION	TOTAL COUNTS	RADON (pCi/l) +/- ERROR
108428	Blank	100	0.9
108437	Blank	102	1.0
108390	6th Flr Rm 670 (library) next to thermostat	255	1.9
108388	Duplicate to 390	102	1.3
108399	6th Flr Rm 638 NW side of off (near Roxanne Evans' desk	118	1.3
108396	6th Flr Rm 629, Col. Lewis' off, next to thermostat	125	0.9
108392	6th Flr through doorway 610 Rm 668 S wall next to thermostat (near gray filing cabinet	110	1.1
108391	6th Flr through doorway 610 Rm 668, S wall next to thermostat (near gray filing cabinets) <i>Duplicate to 108392</i>	100	3.3
108395	6th Flr, Suite 610-699, Rm 697 (DASG-HCZ) next to light switch	103	1.1
108412	6th Flr, Rm 698, SGPS-PDC, Suites 690-699 (through these doors)	100	1.5

Table Continued

DETECTOR SERIAL NUMBER	SAMPLE LOCATION	TOTAL COUNTS	RADON (pCi/l) +/- ERROR
108394	5th Flr, Rm 529, R wall toward end of off	142	2.0
108408	5th Flr, Men's Rm, near Rm 564	100	1.1
108403	5th Flr, Rm 564, Conf Rm	101	1.1
108402	5th Flr, Rm 537-544, 594 (DASE-RMA) S wall next to 592B	121	1.5
108409	5th Flr, Rm 549 (DASG-AOG) on col next to Rm 539	102	1.3
108407	5th Flr, 550-559 Suite , Rm 557 on W wall near filing cabinets	100	1.5
108401	5th Flr, Rm 521, L wall, next to thermostat ,DASE-PTL	101	1.3
108397	5th Flr, Suite 517, far R wall next to "DASG-PTZ-E" sign	105	1.2

108404 host

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO

306-0632

2. Detector number 038-SKYLNS-02 108428 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-01325ZZ-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

SKYLINE VI, 5111 LEESBURG PIKE,

FALLS CHURCH

BLANK 1

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/16/89

6. Name and Phone Number of
individual recovering detector

K. Nollinger

306-0632

Attachment 2

18

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO
306-0632

2. Detector number 038-SKYLNS-02 108437 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-01325ZZ-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

SKYLINE IV, 5111 LEESBURG PIKE,

FALLS CHURCH

BLANK 2

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/16/89

6. Name and Phone Number of
individual recovering detector

K. Noffsinger

Attachment 2

19

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO
306-0632

2. Detector number 038-SKYLNS-02 108390 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-01325ZZ-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

SKYLINE V, 5111 LEESBURG PIKE,
FALLS CHURCH, 16th FLOOR, ROOM 67C (LIBRARY) NEXT TO THERMOSTAT

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/16/89

6. Name and Phone Number of
individual recovering detector

K. Noffsinger

Attachment 2

16

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO

306-0632

2. Detector number 038-SKYLNS-02 108388 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-0132522-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

SKYLINE II, 5111 LEESBURG PIKE,

FALLS CHURCH, 6th FLOOR, Room 1070 (LIBRARY) NEXT TO THERMOSTAT

DUPLICATE TO 390

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/16/89

6. Name and Phone Number of
individual recovering detector

K. Noffsinger

Attachment 2

17

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO
306-0632

2. Detector number 038-SKYLNS-02 108399 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-01325ZZ-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

SKYLINE IV, 5111 LEESBURG PIKE

FALLS CHURCH, 6th FLOOR, Room 638, NW SIDE OF OFFICE (NEAR ROXANNE EVANS
DESK)

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/16/89

6. Name and Phone Number of
individual recovering detector

K. Nofflinger

Attachment 2

12

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO
306-0632

2. Detector number 038-SKYLINE-02 108396 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-013252Z-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

SKYLINE II, 5111 LEESBURG PIKE
FALLS CHURCH, 6th FLOOR, ROOM 629, COL. LEWIS'S OFFICE, NEXT TO THERMOSTAT

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/16/89

6. Name and Phone Number of
individual recovering detector

K. Noffsinger

Attachment 2

13

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of individual placing detector CHRIS PEPINO
306-0632
2. Detector number 038-SKYLNS-02 108392 (number should be determined by utilizing GSA building number and then a detector number, i.e., MA-01325ZZ-01).
3. Date detector was activated 7/27/89
4. Actual Location of detector SKYLINE IV, 5111 LEEBURG AVE
FALLS CHURCH, 16TH FLOOR, THROUGH DOORWAY 610, ROOM 668, SOUTH WALL NEXT
TO THERMOSTAT (NEAR GRAY PELLETT CABINETS)
- (Provide a brief description of the location where the detector was placed. Include name of the building, floor, room/area, any unique structure or equipment associated with the placement of the detector. Description should be of such detail that another individual could place a detector in the same location).
5. Date detector was deactivated 10/16/89
6. Name and Phone Number of individual recovering detector IC Noffsinger

Attachment 2

14

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO
306-0632

2. Detector number 038-SKYLNS-02 108391 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-0132522-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

SKYLINE II, 5111 LEESBURG PIKE,

FALLS CHURCH, 6TH FLOOR, THROUGH DOORWAY 610, ROOM 665, SOUTH WALL NEXT TO
THERMOSTAT (NEAR GYM FILING CABINETS)

DUPLICATE TO 392

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/16/89

6. Name and Phone Number of
individual recovering detector

K. Nofflinger

Attachment 2

15

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO
306-0632

2. Detector number 038-SKYLNS-02 10838 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-01325ZZ-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

SKYLINE IV, 5111 LEESBURG AVE,
FALLS CHURCH, 6th FLOOR, SUITE 698-699, Room 699 (DASG-HCZ-S), NEXT TO
LIGHT SWITCH

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/16/89

6. Name and Phone Number of
individual recovering detector

Kim Noffsinger

Attachment 2

10

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO
306-0632

2. Detector number 038-SKYLINE-02 108412 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-0132522-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

SKYLINE II, 5111 LEESBURG PIKE
FALLS CHURCH, 6th FLOOR, Room 698 (SEPS PDC), SUITES 690-699 (THROUGH THESE DOORS)

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/16/89

6. Name and Phone Number of
individual recovering detector

K. Noffsinger

Attachment 2

11

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO
306-0632

2. Detector number 038-SKYLINE-02 108394 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-01325ZZ-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

SKYLINE IV, 5111 LEESBURG PIKE,
FALLS CHURCH, 5TH FLOOR, Room 529, Right Wall TOWARD END OF OFFICE
FRONT WALL

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/16/89

6. Name and Phone Number of
individual recovering detector

K. Noffsinger

Attachment 2

6

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO
306-0632

2. Detector number 038-SKYLINE-02 108408 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-01325ZZ-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

SKYLINE IV, 5111 LEESBURG PIKE,
FALLS CHURCH, 5th FLOOR, MEN'S ROOM, NEAR ROOM 564

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/16/89

6. Name and Phone Number of
individual recovering detector

K. Noffsinger

Attachment 2

1

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO
306-0632

2. Detector number 038-SKYLINE-02 108403 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-013252Z-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

SKYLINE IV, 5111 LEESBURG PIKE,

FALLS CHURCH, 5th Floor, Room 564, CONFERENCE ROOM

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/14/89

6. Name and Phone Number of
individual recovering detector

K. Noflinger

Attachment 2

3

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO
306-0632

2. Detector number 038-SKYLNS-02 108402 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-01325ZZ-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

^{1. ROUGH DRAFT}
^{2. LABELED}
SKYLINE V, 5111 LEESBURG PIKE,
FALLS CHURCH, 5th FLOOR, ROOM 537-544, - 544 (DASC-RMA), SOUTH WALL NEXT
TO 592B

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/16/89

6. Name and Phone Number of
individual recovering detector

K. Noffsinger

Attachment 2

7

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO
306-0632

2. Detector number 038-SKYLINE-02 108409 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-01325ZZ-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

SKYLINE II, 5111 LEESBURG PIKE,
FALLS CHURCH, 5th FLOOR, Room 549 (DASG-ADG), ON COLUMN NEXT TO ROOM 539

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/16/89

6. Name and Phone Number of
individual recovering detector

K. Noffsinger

Attachment 2

8

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO

306-0632

2. Detector number 038-SKYLNS-02 108407 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-01325ZZ-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

SKYLINE IV, 5111 LEESBURG PIKE

FALLS CHURCH, 5TH FLOOR, 550-559 SUITE, ROOM 557, ON WEST WALL NEAR FILING
CABINETS

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/16/89

6. Name and Phone Number of
individual recovering detector

K. Noffinger

Attachment 2

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO
306-0632

2. Detector number 038-SKYLNS-02 108401 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-01325ZZ-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

FALLS CHURCH, 5TH FLOOR, Room 521, SKYLINE IV, 5111 LEESBURG PIKE,
(Bldg - PTL), LEFT WALL, NEXT TO THERMISTAT

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/16/89

6. Name and Phone Number of
individual recovering detector

K. Nozlinger

Attachment 2

5

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO
306-0632

2. Detector number 038-SKYLNS-02 108397 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-01325ZZ-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

SKYLINE V, 5111 LEESBURG AVE
FALLS CHURCH, 4th FLOOR, ~~STAIR~~ SUITE 517, FAR RIGHT WALL NEXT TO "DASG-172-E"
SIGN.

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

10/16/89

6. Name and Phone Number of
individual recovering detector

K. Noffsinger

Attachment 2

RADON DETECTOR
LOCATION QUESTIONNAIRE

1. Name and Phone Number of
individual placing detector

CHRIS PEPINO

306-0632

2. Detector number 038-SKYLNS-02 108404 (number should be
determined by utilizing GSA building number and then a detector number,
i.e., MA-013252Z-01).

3. Date detector was activated

7/27/89

4. Actual Location of detector

SKYLINE IV, 5111 LEESBURG PIKE,

FALLS CHURCH, 5TH FLOOR, ROOM SUITE 553, WEST (FAR RIGHT) CORNER NEXT TO FILING
CABINETS

(Provide a brief description of the location where the detector was
placed. Include name of the building, floor, room/area, any unique
structure or equipment associated with the placement of the detector.
Description should be of such detail that another individual could place a
detector in the same location).

5. Date detector was deactivated

Detector Missing

6. Name and Phone Number of
individual recovering detector

Attachment 2

9

AUG 22 1991

MEMORANDUM FOR LARRY POPLIN, BUILDINGS MANAGER,
ARLANDRIA FIELD OFFICE (WPBWA)

THRU: SONNY COOK, DISTRICT MANAGER
WEST DISTRICT (WPBW)

FROM: FREDERICK J. SISSON ~~FRED J. SISSON~~
BRANCH CHIEF, SAFETY AND ENVIRONMENTAL
MANAGEMENT DIVISION (WPXE)

SUBJECT: Lead in Water Test Results

Attached are the sample results for the lead in water testing which was performed on May 30 & 31, 1991 in SKYLINE V located at 5113 Leesburg Pike, Falls Church, VA (VA0244ZZ). First draw samples were collected from each water fountain and sinks located throughout the building (taken first thing in the morning). In addition, samples were collected from the main water supply line. The sampling protocol used was developed to represent a "worst case" situation.

Samples were drawn from 20 sinks and 04 water fountains. The following samples had elevated lead levels:

Main water line (first and second draw)
Fourth floor- North Women's room; handicap sink (cold)
Fourth floor- South utility sink (cold)
Fifth floor- South water fountain

The following actions are required:

There was no evidence the main water line had been flushed at least 8-hours prior to sample collection. Flushing the system is required to eliminate accumulated sediment within the water line particularly any dead end piping adjacent to the supply test point. The main water line and associated pipe work needs to be flushed and the line resampled.

Remove from service (i.e. cover with an inverted plastic bag) the water fountain and sinks which tested above 50 ppb. Perform, or have the lessor perform, a visual inspection of all accessible plumbing associated with the point source. Look for recent repairs in which lead solder may have been used. Look for bad solder joints in which solder may have beaded inside the pipe. Clean any clogged screens. After taking corrective action, request that the lessor resample the water to document the effect of corrective action. Notify GSA- WPX of findings. Record all findings and follow-up actions in the building files.

NOTE: At least 8 hours prior to follow-up sampling, flush the water for 15 minutes at each point source. This flushing should

clear the line of any sediment which may have accumulated in the proximity piping.

If you have any questions, please call Trish Gretskey at (202) 708-5254.

Attachment



OCCUPATIONAL • ENVIRONMENTAL • ANALYTICAL
A SUBSIDIARY OF PRINCETON TESTING LABORATORY, INC.

4451-G Parliament Place
Lanham, MD 20706
301/306/0632
FAX: 301/306/9354

Plymouth Greene Office Campus A-1
801 E. Germantown Pike
Norristown, PA 19401
215/277/4520
FAX: 215/277/6099

July 30, 1991

Lead in Drinking Water
Skyline V
OMC JOB #: 038-SKYL5-03

Performed for:

GSA, NCR, WPX
ROB Room 2036
7th and D Streets, S. W.
Washington, D. C. 20407

Contract #: GS-11P87MJD-0030

Work Request #: P79230791/9224

On May 30 and 31, 1991, Dave Dudzinski of OMC collected 48 water samples from the Skyline V Building, 5113 Leesburg Pike, Falls Church, Virginia. The samples were collected between 6:00 and 8:00 a.m., and were submitted to the laboratory for lead analyses.

First draw water samples were collected from each water fountain, each cafeteria sink, each snackbar sink, each utility sink, each lab sink, and each restroom sink throughout the building.

First and second draw samples were collected from either the closest outlet to the main water supply or the main water supply itself. The GSA contacts were questioned as to the location of the main water supply.

Blanks and duplicates were also included in the water sampling set. Ten percent of the samples collected from the sampling site were blanks (250 milliliters of distilled water) and ten percent were duplicated (one sample made into two).

The water samples were collected and analyzed by EPA Method 239.2 (Graphite Furnace - Atomic Absorption Spectrophotometry) for the determination of total lead. The Environmental Protection Agency (EPA), through the National Interim Primary Drinking Water Standard has established a maximum contaminant level (MCL) for lead at 50 parts per billion (ppb).

Sinks in the restrooms are numbered in reference to the entrance. The sinks are numbered starting with the sink closest to the door. Therefore, Sink #1 would be closest to the door and Sink #4 would be the furthest sink from the door.

RECEIVED
GSA-NOR
SAFETY & ENVIRONMENTAL
MANAGEMENT DIV. (WPX)
AUG 7 7 48 AM '91

Comprehensive Environmental Management Services

my 8/8/91

QUALITY ASSURANCE

The duplicate sample results showed little variation to the original sample result. The blank samples detected very little to no lead. All blank sample results were less than 5 ppb.

CONCLUSIONS

The following sample locations showed elevated lead levels.

5-30,003	5th floor, south, Halsey Taylor, Fountain	606 ppb
5-30,007	4th floor, south, Utility Sink, Cold	86
5-30,008	4th floor, south, Utility Sink, Hot	41
5-30,013	6th floor, south, Utility Sink, Cold	40
5-30,014	6th floor, south, Utility Sink, Hot	49
5-30,002	4th floor, north, Womens BR, Handicap Sink, Cold	57

No model or serial numbers were available for the Halsey Taylor Fountains, and so none are provided. Please contact us should you have any questions.

Sincerely,

(b) (6)

David M. Kichula, CIH
Manager, Industrial Hygiene Services

OMC, Inc. LABORATORY**LAB**

OMC Inc.
Environmental Services
4451 Parliament Place
Lanham, MD 20706
(301) 306-0632

CLIENT

GSA, NCR, WPX
7TH & D STREETS, SW
ROOM 2036
WASHINGTON, DC 20407

07/31/91

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S A M P L E S A N A L Y S I S

* MAIN WATER SAMPLES *

Sample(s) taken on 05/30, at SKYLINE 5

SAMPLE NUMBER	LOCATION	RESULT
038-SKYL5-03-05/30-00005 MAIN DRAW #1		T=29700 ppb D=267000 ppb
038-SKYL5-03-05/30-00006 MAIN DRAW #2		T=662 ppb D=681 ppb

OMC, Inc. LABORATORY

LAB	CLIENT
OMC Inc. Environmental Services 4451 Parliament Place Lanham, MD 20706 (301) 306-0632	GSA, NCR, WPX 7TH & D STREETS, SW ROOM 2036 WASHINGTON, DC 20407

07/19/91

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S A M P L E S A N A L Y S I S

Sample(s) taken on 05/30, at SKYLINE 5

SAMPLE NUMBER	LOCATION	RESULT
038-SKYLN5-03-05/30-00001	HALSEY TAYLOR 5TH FL. NORTH	< 5 ppb
038-SKYLN5-03-05/30-00002	HALSEY TAYLOR 5TH FL. NORTH	< 5 ppb
038-SKYLN5-03-05/30-00003	HALSEY TAYLOR 5TH FLOOR SOUTH	606 ppb
038-SKYLN5-03-05/30-00004	HALSEY TAYLOR 5TH FL. SOUTH	29 ppb
038-SKYLN5-03-05/30-00007	4TH FL. SOUTH UTILITY SINK COLD	86 ppb
038-SKYLN5-03-05/30-00008	4TH FL. SOUTH UTILITY SINK HOT	41 ppb
038-SKYLN5-03-05/30-00009	4TH FL. NORTH UTILITY SINK HOT	16 ppb
038-SKYLN5-03-05/30-00010	4TH FL. NORTH UTILITY SINK COLD	23 ppb
038-SKYLN5-03-05/30-00013	6TH FL. SOUTH UTILITY SINK COLD	40 ppb
038-SKYLN5-03-05/30-00014	6TH FL. SOUTH UTILITY SINK HOT	49 ppb

OMC, Inc. LABORATORY**LAB**

OMC Inc.
Environmental Services
4451 Parliament Place
Lanham, MD 20706
(301) 306-0632

CLIENT

GSA, NCR, WPX
7TH & D STREETS, SW
ROOM 2036
WASHINGTON, DC 20407

07/19/91

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S A M P L E S A N A L Y S I S

* BLANK SAMPLES *

Sample(s) taken on 05/30, at SKYLINE 5

SAMPLE NUMBER**LOCATION****RESULT**

038-SKYL5-03-05/30-00012 BLANK

< 5 ppb

OMC, Inc. LABORATORY

LAB

OMC Inc.
Environmental Services
4451 Parliament Place
Lanham, MD 20706
(301) 306-0632

CLIENT

GSA, NCR, WPX
7TH & D STREETS, SW
ROOM 2036
WASHINGTON, DC 20407

07/19/91

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S A M P L E S A N A L Y S I S

* DUPLICATE WATER SAMPLES *

Sample(s) taken on 05/30, at SKYLINE 5

SAMPLE NUMBER

LOCATION

RESULT

038-SKYLN5-03-05/30-00011	DUPLICATE OF #O 010	24 ppb
038-SKYLN5-03-05/30-00010	4TH FL. NORTH UTILITY SINK COLD	23 ppb

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S A M P L E S A N A L Y S I S

Sample(s) taken on 05/31, at SKYLINE 5

SAMPLE NUMBER	LOCATION	RESULT
038-SKYL5-03-05/31-00001	4TH FL. NORTH WOMENS ROOM HANDICAP SINK HOT	6 ppb
038-SKYL5-03-05/31-00002	4TH FL. NORTH WOMENS ROOM HANDICAP SINK COLD	57 ppb
038-SKYL5-03-05/31-00003	4TH FL. NORTH WOMENS ROOM SINK 1 HOT	34 ppb
038-SKYL5-03-05/31-00004	4TH FL. NORTH WOMENS ROOM SINK 1 COLD	25 ppb
038-SKYL5-03-05/31-00005	4TH FL. NORTH WOMENS ROOM SINK 2 HOT	16 ppb
038-SKYL5-03-05/31-00006	4TH FL. NORTH WOMENS ROOM SINK 2 COLD	34 ppb
038-SKYL5-03-05/31-00007	4TH FL. NORTH WOMENS ROOM SINK 3 HOT	9 ppb
038-SKYL5-03-05/31-00008	4TH FL. NORTH WOMENS ROOM SINK 3 COLD	14 ppb
038-SKYL5-03-05/31-00009	4TH FL. NORTH MENS ROOM SINK 1 HOT	5 ppb
038-SKYL5-03-05/31-00012	4TH FL. NORTH MENS ROOM SINK 1 COLD	5 ppb
038-SKYL5-03-05/31-00013	4TH FL. NORTH MENS ROOM SINK 2 HOT	12 ppb
038-SKYL5-03-05/31-00014	4TH FL. NORTH MENS ROOM SINK 3 HOT	< 5 ppb
038-SKYL5-03-05/31-00015	5TH FL. NORTH MENS ROOM SINK 1 HOT	6 ppb
038-SKYL5-03-05/31-00016	5TH FL. NORTH MENS ROOM SINK 1 COLD	< 5 ppb
038-SKYL5-03-05/31-00017	5TH FL. NORTH MENS ROOM SINK 2 HOT	< 5 ppb
038-SKYL5-03-05/31-00018	5TH FL. NORTH MENS ROOM SINK 2 COLD	< 5 ppb
038-SKYL5-03-05/31-00019	5TH FL. NORTH MENS ROOM SINK 3 HOT	5 ppb
038-SKYL5-03-05/31-00020	5TH FL. NORTH MENS ROOM SINK 3 COLD	< 5 ppb

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S A M P L E S A N A L Y S I S

Sample(s) taken at SKYLINE 5

SAMPLE NUMBER	LOCATION	RESULT
038-SKYL5-03-05/31-00021	5TH FL. NORTH WOMENS ROOM SINK 1 HOT	9 ppb
038-SKYL5-03-05/31-00024	5TH FL. SOUTH MENS ROOM SINK 3 HOT	< 5 ppb
038-SKYL5-03-05/31-00027	5TH FL. SOUTH MENS ROOM SINK 3 COLD	6 ppb
038-SKYL5-03-05/31-00028	5TH FL. NORTH WOMENS ROOM SINK 1 COLD	15 ppb
038-SKYL5-03-05/31-00029	5TH FL. NORTH WOMENS ROOM SINK 2 HOT	10 ppb
038-SKYL5-03-05/31-00030	5TH FL. NORTH WOMENS ROOM SINK 2 COLD	12 ppb
038-SKYL5-03-05/31-00031	5TH FL. NORTH WOMENS ROOM SINK 3 HOT	5 ppb
038-SKYL5-03-05/31-00032	5TH FL. NORTH WOMENS ROOM SINK 3 COLD	5 ppb
038-SKYL5-03-05/31-00033	5TH FL. SOUTH MENS ROOM SINK 1 HOT	6 ppb
038-SKYL5-03-05/31-00034	5TH FL. SOUTH MENS ROOM SINK 1 COLD	6 ppb
038-SKYL5-03-05/31-00035	5TH FL. SOUTH MENS ROOM SINK 1 COLD	< 5 ppb
038-SKYL5-03-05/31-00036	5TH FL. SOUTH MENS ROOM SINK 2 COLD	7 ppb

OMC, Inc. LABORATORY**LAB**

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ROOM 2036
WASHINGTON, DC 20407

07/19/91

PAGE: 001

S A M P L E S A N A L Y S I S

* BLANK SAMPLES *

Sample(s) taken on 05/31, at SKYLINE 5

SAMPLE NUMBER**LOCATION****RESULT**

038-SKYLN5-03-05/31-00011 BLANK

< 5 ppb

038-SKYLN5-03-05/31-00023 BLANK

< 5 ppb

038-SKYLN5-03-05/31-00026 BLANK

< 5 ppb

OMC, Inc. LABORATORY

LAB	CLIENT
OMC Inc. Environmental Services 4451 Parliament Place Lanham, MD 20706 (301) 306-0632	GSA, NCR, WPX 7TH & D STREETS, SW ROOM 2036 WASHINGTON, DC 20407

07/19/91

PAGE: 001

S A M P L E S A N A L Y S I S

* DUPLICATE WATER SAMPLES *

Sample(s) taken on 05/31, at SKYLINE 5

SAMPLE NUMBER	LOCATION	RESULT
038-SKYL5-03-05/31-00010	DUPLICATE OF #0 009	5 ppb
038-SKYL5-03-05/31-00009	4TH FL. NORTH MENS ROOM SINK 1 HOT	5 ppb
038-SKYL5-03-05/31-00022	DUPLICATE OF #0 021	7 ppb
038-SKYL5-03-05/31-00021	5TH FL. NORTH WOMENS ROOM SINK 1 HOT	9 ppb
038-SKYL5-03-05/31-00025	DUPLICATE OF #0 024	5 ppb
038-SKYL5-03-05/31-00024	5TH FL. SOUTH MENS ROOM SINK 3 HOT	< 5 ppb

UNITED STATES GENERAL SERVICES ADMINISTRATION

NATIONAL CAPITAL REGION

SAFETY AND ENVIRONMENTAL MANAGEMENT DIVISION

FACSIMILE TRANSMISSION COVER SHEET

Transmitted To: LARRY POPLIN 08/14/91
(NAME) (DATE)

ARLANDRIA FIELD OFFICE (WPBWA)
(ORGANIZATION)

ADDRESS: (BUILDING, ROOM #, ETC.)

(703) 756-4363 | (703) 756-6163
(OFFICE TELEPHONE) (FAX TELEPHONE)

=====
Transmitted From: WPXE

(202) 708-5236 | (202) 708-6618
(OFFICE TELEPHONE) (FAX TELEPHONE)

Pages Transmitted: ¹³
12 (COUNT INCLUDES COVER SHEET)

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Contents/Comments:

Attached is OMC's lead-in-water report for work performed on May 30-31, 1991 at the Skyline V Building located at 5113 Leesburg Pike, Falls Church, VA (VA0244ZZ)

05 of 48 samples were above 50 ppb

(corrective actions required)

=====
NOTE: If the number of pages transmitted have not been received, please contact sender and request transmission of the unreceived pages.



OCCUPATIONAL
MEDICAL CENTER, INC.

Rec'd 10/31/86
69749

490 L'Enfant Plaza East, S.W., Suite 4300, P.O. Box 23580, Washington, D.C. 20026

(202) 488-7990

October 16, 1986

**Air Quality Survey
7969 Tysons Corner Shopping Center**

VA0245ZZ

PERFORMED FOR:

General Services Administration
Environmental and Safety Management Division
7th and D Streets, SW, Suite 2034
Washington, DC 20407

Contract #GS-11C-40323

Work Request #86-219-278

ATTN: Mr. Peter Gillson

At the request of GSA's Safety and Environmental Management Division, the Occupational Medical Center conducted a series of air quality tests in the offices of the U.S. Marshal's Service located at 7969 Tysons Corner Shopping Center, Tysons Corner, Virginia. Testing was conducted from August 18 to August 22, 1986. The survey was in response to employee complaints concerning the air quality.

BACKGROUND

The U.S. Marshals Service occupies offices on the third floor and lower level of the Tysons #1 Building, part of the Tysons Corner Shopping Center mall complex. Complaints regarding office air quality were registered by occupants on the lower level. Employees in these offices stated that during busy store delivery and trash collection days, engine exhaust and trash odors would enter the offices causing eye and sinus irritation. Reportedly the odors and engine exhaust build up within the below ground delivery tunnel and infiltrate the office areas.

An inspection of the air handling unit room (AHU-room) showed that return air ducts from the offices ended at the wall of the room. Therefore, office return air enters the room and is drawn into the recirculation air dampers, back into the air handling unit. The fresh air dampers were shut therefore, all office supply air was recirculated. The interior of the AHU-room showed heavy accumulations of soot on suspended ceiling tiles and gridwork. Several tiles were missing and there were holes and large open spaces to outside areas. Since the air handler draws air from the room, a negative air pressure was created causing air contaminants to be drawn into the AHU-room and subsequently into the air handling unit. Vents in the corridor outside the air handling room also had accumulations of soot.

occupational medicine • industrial hygiene • analytical laboratory • hazard communication

40-415



In response to the initial inspection, a series of air quality tests were conducted. These tests included ventilation measurements of supply and return air vents within the lower level offices, continuous carbon monoxide testing over a four day period, Miran spot tests for carbon monoxide and carbon dioxide levels, and aeroallergen testing which included air and surface residue wipe samples.

SAMPLING PROCEDURES

Carbon Monoxide and Carbon Dioxide Testing - Carbon monoxide and carbon dioxide levels were determined in locations within the offices, in the adjacent service corridor to the delivery tunnel, in the tunnel and dock area, in the air handling room, and other locations. The tests were conducted with a Foxboro Analytical Miran 1B portable non-dispersive infrared gas analyzer. The Miran analyzer determines the concentration of a sample component by measuring the degree to which the sample absorbs infrared light. The Miran is internally calibrated and controlled by its on board micro-computer. The results from sampling have been summarized in the attached results sections.

Carbon monoxide levels were monitored continuously in Room L106. This room was identified as being the first room serviced by the air supply system. An Interscan carbon monoxide analyzer was used to determine the carbon monoxide levels. The location was sampled for twenty-four hours over a four day period to determine potential exposure for any given time in which employees may occupy the area. The instrument was calibrated prior to use with known concentrations of CO, traceable to the National Bureau of Standards. The room air was then sampled and the results continuously plotted on a recorder chart. Data was extracted from the chart and daily average concentrations were computed. The data has been summarized in the results section.

Ventilation Survey - Office supply and return air was measured with a Flowhood (Shortridge Instruments, Inc., Scottsdale, Arizona), which has a direct readout in cubic feet per minute (CFM). All accessible supply and return diffusers were measured. Individual air volumes from each diffuser were added to determine total supply and return air to the office. During the sampling period, the air handling unit fresh make up air dampers were closed. Therefore, 10 percent fresh makeup air due to damper leakage was assumed and the office air was 90 percent recycled. Results are summarized in the attached table.



Microbiological Allergens (Airborne) - Sampling for viable airborne fungal spores was performed with a Microban Sampler (Ross Industries, Midland, VA). This unit draws air at a calibrated rate of 0.7 cubic feet per minute through a microsieve plate. This process accelerates airborne particles and impacts them onto an agar-filled petri dish insert. Particles containing viable spores grow into colonies on this media and their numbers give an indications of the concentration of viable microorganisms in the air sampled. This data was used to estimate the health risk to occupants from airborne exposure to harmful microorganisms, which is the most common route of exposure. Sampling intervals of fifteen (15) minutes, representing 10.5 cubic feet of air, were used. The colonies were counted and identified at the OMC Laboratories in Washington, DC. Results have been summarized in the attached results section.

Microbiological Allergens (Surface) - Surface samples were collected using Culturettes (American Scientific Products, Division of American Hospitals Supply Corporation, McGaw Park, Illinois). These sterile swabs are saturated with 0.5 ml modified Stuart's bacterial transport medium which aids in the collection and survival of viable organisms. The swabs were used to inoculate Sabouraud Dextrose (SAB) and Tryptic Soy (TSA) agar-filled petri plates for culturing and identification of microorganisms present. These surface sampling methods give estimates of levels microbial contamination on various surfaces. This information is used to investigate possible sources of airborne contamination in occupied areas. Results wee summarized in the attached results section.

RESULTS AND DISCUSSION

Carbon Monoxide - Carbon Monoxide (CO) is classified as a chemical asphyxiant in that it has a higher affinity for blood hemoglobin than oxygen. This results in decrease of the normal supply of oxygen to the body tissues. CO is one of the most prevalent of all indoor air pollutants, introduced into a building from automobile exhaust, industrial combustion sources, or combustion units for space heating. Indoor sources for air contamination can be produced from tobacco smoke, improperly vented combustion sources, or from leaking heat exchangers.

CO levels recorded were well below background levels (5 parts per million) in the U.S. Marshals Service offices, and slightly above in the service corridor and in the tunnel and loading dock areas, using the Miran sampler. The interscan sampler recorded no significant levels during the four day sampling period.



Carbon Dioxide - Although carbon dioxide (CO_2) is not normally considered a toxic air contaminant, levels can provide an indication of the effectiveness of the air handling system in supplying and distributing fresh air throughout the work area. Elevated levels can contribute to an overall "stale air" feeling by in itself does not pose a health hazard. CO_2 levels detected well below background levels (500 parts per million).

Aeroallergens - Concentrations of airborne microorganisms in the two offices sampled were considered elevated. This has been based on comparisons with data derived from previous OMC surveys in federal office buildings. Although the organisms found were non-pathogenic, in high concentrations they pose a risk to susceptible, immune-compromised individuals.

Investigation of possible sources of microorganisms in the U.S. Marshals offices began with surface sampling in the air handling room and within the air handling unit itself. Air handling systems have often been implicated in the spread of high concentrations of microorganisms in federal office buildings. The organisms identified in air samples collected in the office match well with the types of organisms identified within the air handling room and within the air handling unit. This implicates the air handling system as a source for aeroallergen contamination.

Ventilation Survey - The American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE) has a recommended standard of 20 cubic feet per minute of fresh air per occupant. GSA's recommended standard for fresh air supply per occupant of 5 cubic feet per minute. Of the approximately 37 occupied spaces tests, 17 areas were below the ASHRAE recommended level. All areas that had supply air were above the GSA recommended level.

It was noted that of the approximately 12,000 cubic feet per minute of supplied air to the lower level office spaces, only 5,000 cubic feet per minute of return air was drawn through the return air ducts back to the air handling system (or approximately 40%). Therefore in the air handling room, the remainder of the air supplied to the system came primarily through holes in the walls, ceiling, and doorway. The delivery tunnel is adjacent to the air handling room. The heavy accumulations of soot around gaps in the suspended ceiling may have been an indication that the make up air was primarily from the tunnel.



CONCLUSIONS AND RECOMMENDATIONS

It is recommended that a program for the isolation of the air handling room, should be isolated from the delivery tunnel should be initiated as soon as possible. This should involve sealing all openings in the air handling room walls and ceiling. This would greatly improve the effectiveness of the office return air system. In addition to this, the fresh air dampers should be opened to provide all offices with at least 20 CFM of fresh air per occupant.

In order to reduce the presence of aeroallergens in the air handling system, both the air handling unit and air handling room should be thoroughly cleaned and disinfected with an appropriate biocidal solution. Aeroallergens were readily identified in the soot on suspended ceiling tiles. Therefore, tiles in the room should be considered contaminated and replaced. After the initial cleaning program has been completed, a program for regular cleaning and disinfection of the system should be initiated.

It is also recommended that after the completion of the recommended actions, tests should be repeated to determine the effectiveness of these actions. If there are any questions regarding this matter, please do not hesitate to contact this office.

Sincerely,

(b) (6)

Michael A. Cecil
Supervisory Industrial Hygienist

(b) (6)

Michael J. Larsen, C.I.H.
Director of Industrial Hygiene Services



**Air Quality Survey
Results Section**

**U.S. Marshals Service
Tysons #1 Building
August 18 to 22, 1986**

Carbon Monoxide Test Results
U.S. Marshals Service

A) Continuous Carbon Monoxide Testing (Intersan)

Sampling was conducted in Room L106, Sampling was initiated on August 18, 1986 and the chart record was collected on August 22, 1986. No levels for carbon monoxide above background were recorded for this period.

B) Miran Sampling 8/20/86 (12:30 pm to 1:30 pm)

<u>Location</u>	<u>Average Reading (ppm)</u>
Lobby of Tysons #1 Building	1.2
Lower Level elevator lobby	1.7
Main corridor in U.S. Marshal's office (lower level)	2.4
Space Transportation and Communication Division office	1.6
Room L106	1.8
Service Corridor (lower level)	6.0
Tunnel loading dock	6.4
Corridor to air handling unit supplying U.S. Marshal's office	3.5
Air handling unit room	0.6

Carbon Dioxide Test Results
U.S. Marshals Service

<u>Location</u>	<u>Average Reading (ppm)</u>
Lobby of Tysons #1 Building	200
Lower Level elevator lobby	225
Main corridor in U.S. Marshal's office (lower level)	268
Transportation and Safety Management office	310
Room L106	310
Service Corridor (lower level)	565
Tunnel loading dock	195
Corridor to air handling unit supplying U.S. Marshal's office	223

Aeroallergen Air Sample Results
U.S. Marshals Service

Sample Number	Date	Location	Media	Organism Type	Count	Colony/Ft ³ Air
7969TC-8-20-A1	8/20/86	US Marshal's office Room L106 back of room left side	TSA	Staph. epidermidis Penicillium spp.	3 1	0.4
796TC-8-20-A2	8/20/86	Same location as A1	SAB	Bacillus spp. Staph. epidermidis	TNTC 21	TNTC
796TC-8-20-A3	8/20/86	Room L103 back room left side desk	TSA	Staph. epidermidis Bacillus spp. Rhizopus spp.	8 4 1	1.2
796TC-8-20-A4	8/20/86	Same location as A3	SAB	Rhizopus spp. Bacillus spp. Staph. epidermidis Yeasts	1 3 7 TNTC	TNTC
796TC-8-20-A5	8/20/86	Mall level office corridor next to elevator bank	TSA	Staph. epidermidis Bacillus spp. Staph. citreus Flavobacterium spp. Yeasts	6 3 5 1 2	4.9
7969TC-8-20-A6	8/20/86	Same location as A5	SAB	Bacillus spp. Staph. epidermidis Staph. citreus Rhizopus spp. Pseudomonas spp.	2 11 3 2 1	5.4
796TC-8-20-A7	8/20/86	Outdoor sample at entrance mall	SAB	Penicillium spp. Bacillus spp. Staph. epidermidis Rhizopus spp.	TNTC 9 2 2	TNTC
796TC-8-20-A8	8/20/86	Same location as A7	TSA	Rhizopus spp. Bacillus spp. Penicillium spp.	8 2 3	1.2

TNTC = Too Numerous to Count

Aeroallergen Surface Residue Wipe Sample Results
U.S. Marshals Service

Sample Number	Date	Location	Media	Organism Type	Count
7969TC-8-18-W1	8/18/86	Air handling room, return air intake inside room, sample from damper.	TSA	Bacillus spp.	10
				Rhizopus spp.	3
			SAB	Bacillus spp.	5
				Rhizopus spp.	9
				Aspergillus niger	10
7969TC-8-18-W2	8/18/86	Same location as W1, inside AHU floor between filters and coils.	TSA	Bacillus spp.	7
				Yeasts	6
				Aspergillus niger	3
				Rhizopus spp.	1
			SAB	Bacillus spp.	8
				Staph. epidermidis	1
				Rhizopus spp.	4
				Aspergillus niger	5
7969TC-8-18-W3	8/18/86	Same location as W1 soot on ceiling tile	TSA	Bacillus spp.	4
				Staph. epidermidis	2
				Rhizopus spp.	3
			SAB	Bacillus spp.	9
				Staph. epidermidis	1
				Yeasts	3
				Rhizopus spp.	4

Aeroallergen Surface Residue Wipe Sample Results
U.S. Marshals Service

Sample Number	Date	Location	Media	Organism Type	Count
7969TC-8-18-W4	8/18/86	Return air duct opening, far end of room.	TSA	Bacillus spp.	1
				Penicillium spp.	3
				Aspergillus niger	1
			SAB	Aspergillus niger	1
				Penicillium spp.	3
7969TC-8-18-W5	8/18/86	Same location as W1, return air grating opposite W4	TSA	Bacillus spp.	4
				Staph. epidermidis	2
				Rhizopus spp.	3
				Yeasts	2
			SAB	Bacillus spp.	3
				Staph. epidermidis	4
				Rhizopus spp.	2
7969TC-8-18-W6	8/18/86	Same location as W1 return air duct opening closest to door	TSA	Bacillus spp.	4
				Rhizopus spp.	1
				Staph. citreus	1
			SAB	Bacillus spp.	1
				Staph. citreus	1
				Aspergillus niger	1
				Penicillium spp.	4

Results From Ventilation Survey
U.S. Marshals Service
(Lower Level Offices)

Room Number	Number of Occupants	Air Supply (CFM)			Air Return (CFM)
		Air Supply	Fresh Air	Fresh Air/ Occupant	
Space, Transportation, and Communication Division Suite (L103):					
Stephen's Office	2	318	32	16	72
L103-L	1	234	23	23	120
Sullivan's Office	1	276	28	28	no return
L104	1	330	33	33	no return
Johnson's Office	1	282	28	28	no return
Bowden's Office	1	330	33	33	258
Rolen's Office	1	276	28	28	162
Bryant's Office	1	114	11	11	no return
L103-E	1	234	23	23	no return
Tolson's Office	1	192	19	19	no return
L103-D	1	no supply	--	--	174
Storage Space	--	no supply	--	--	no reading
Robert's Office	1	126	13	13	no return
Bell's Office	1	102	10	10	no return
Ertec's Office	1	60	6	6	no return
Corridor	--	1206	120	--	1002

Results From Ventilation Survey
U.S. Marshals Service
(Lower Level Offices)

Room Number	Number of Occupants	Air Supply (CFM)			Air Return (CFM)
		Air Supply	Fresh Air	Fresh Air/ Occupant	
Suite L107:					
Reception Area	1	192	19	19	216
L107-A	1	474	47	47	126
L107-B	1	210	21	21	no return
L107-C	1	288	29	29	no return
L107-D	1	192	19	19	no return
L107-E	1	204	20	20	66
L107-F	1	264	26	26	60
Short Corridor	-	84	8	-	no return
Main Corridor	-	732	73	-	423
Suite L102:					
Reception Area	3	960	96	32	870
L102-A	4	432	43	11	174
L102-B	1	192	19	19	no return

Results From Ventilation Survey
U.S. Marshals Service
(Lower Level Offices)

Room Number (Main Corridor)	Number of Occupants	Air Supply (CFM)			Air Return (CFM)
		Air Supply	Fresh Air	Fresh Air/ Occupant	
Suite L102:					
L102-C	1	234	23	23	no return
L102-E	1	222	22	22	126
L102-F	1	180	18	18	90
L102-G	1	276	28	28	no return
L102-H	no occupant	no supply	-	-	no return
Suite L106:					
Reception Area	2	132	13	7	168
Main Office	12	1092	109	9	540
Suite L108:					
L108-A	1	270	27	27	no return
L108-B	1	210	21	21	144
L108-C	2	227	23	12	no return
L108-D	1	192	19	19	no return
L108-E	1	156	16	16	no return
L108-F	1	162	16	16	no return
Corridor	-	198	20	-	288
Total Air:		11,855	5079		
CFM = Cubic Feet per Minute					

CFM = Cubic Feet per Minute